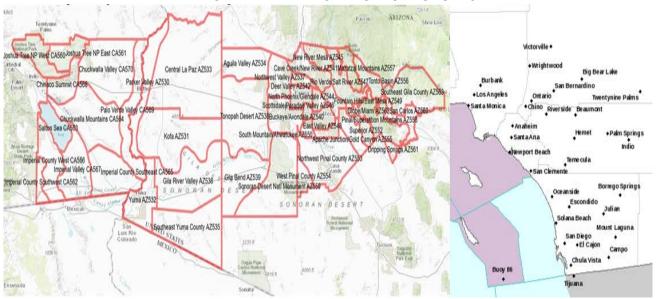
# Appendix A Public Notification that a potential event was occurring (40 CFR §50.14(c)(1))

## FIGURE A-1 NATIONAL WEATHER SERVICE PUBLIC ZONES



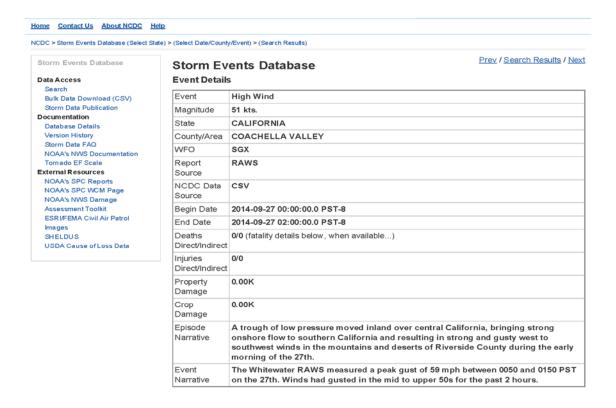
**Fig A-1:** Illustrates the public zones serviced by the National Weather Service Office in Phoenix and San Diego. Imperial County, including southeast sections of Riverside County are part of the reporting public zone areas from the Phoenix office

An index listing all of the issued NWS Area Forecast Discussions and notices begins with page 77. Beginning on page 77 a listing of all NWS Area Forecast Discussions and notices begin organized by date and time. All referenced notices in the main document are included beginning with page 85.

### FIGURE A-2 STORM EVENTS DATABASE EVENTS DETAILS

2/5/2016

Storm Events Database - Event Details | National Climatic Data Center



#### All events for this episode:

Location	County/Zone	St.	Date	Time	T.Z.	Type	Maq	Dth	Ini	PrD	CrD
Totals:								0	0	0.00K	0.00K
SAN BERNARDINO COUNTY MOUNTAIN	SAN BERNARDINO COUNTY MOUNTAIN	CA	09/26/2014	23:00	PST- 8	High Wind	57 kts. MG	0	0	0.00K	0.00K
COACHELLA VALLEY (ZONE)	COACHELLA VALLEY (ZONE)	CA	09/27/2014	00:00	PST- 8	High Wind	51 kts. MG	0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

Privacy Policy | FOIA | Information Quality | Disclaimer | Contact Us



http://www.ncdc.ncaa.gov/stormevents/eventdetails.jsp?id=544108

1/1

**Fig A-2:** An excerpt the storm events database. The event details describe the trough of low pressure as moving inland over central California and bringing strong onshore flow to southern California and resulting strong and gusty west to southwest winds in the mountains and deserts. Source:

https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=544108

### FIGURE A-3 SMOKE/DUST OBSERVED IN SATELLITE IMAGERY

2/6/2017

Smoke Text Product - Satellite Services Division

#### Saturday, September 27, 2014

DESCRIPTIVE TEXT NARRATIVE FOR SMOKE/DUST OBSERVED IN SATELLITE IMAGERY THROUGH 0230Z September 28, 2014

#### SMOKE:

Central U.S:

An elongated area of thin smoke persists over much of the central U.S, extending from the southern Plains northward over the Midwest, extending past the U.S/Canadian border and into southern parts of Manitoba and Ontario. This smoke originates from the multitude of agricultural fires occurring throughout the Mississippi Valley. Another area of light density smoke is visible moving eastward over eastern Montana and North Dakota, combining with the larger smoke plume across the central U.S. This area of smoke originates from wildfires that have occurred in the western U.S.

#### DUST:

Areas of blowing dust are seen across much of southern California, moving southeastward towards the CA/AZ border. Most of the dust is to the south and east of San Bernandino, originating from multiple points of origin.

#### Heeps

THIS TEXT PRODUCT IS PRIMARILY INTENDED TO DESCRIBE SIGNIFICANT AREAS OF SMOKE ASSOCIATED WITH ACTIVE FIRES AND SMOKE WHICH HAS BECOME DETACHED FROM THE FIRES AND DRIFTED SOME DISTANCE AWAY FROM THE SOURCE FIRE..TYPICALLY OVER THE COURSE OF ONE OR MORE DAYS. AREAS OF BLOWING DUST ARE ALSO DESCRIBED. USERS ARE ENCOURAGED TO VIEW A GRAPHIC DEPICTION OF THESE AND OTHER PLUMES WHICH ARE LESS EXTENSIVE AND STILL ATTACHED TO THE SOURCE FIRE IN VARIOUS GRAPHIC FORMATS ON OUR WEB SITE:

JPEG: http://www.ospo.noaa.gov/Products/land/hms.html
GIS: http://www.firedetect.noaa.gov/viewer.htm
kML: http://www.ssd.noaa.gov/PS/FIRE/kml.html

ANY QUESTIONS OR COMMENTS REGARDING THIS PRODUCT SHOULD BE SENT TO SSDFireTeam@noaa.gov

- Unless otherwise indicated:
  Areas of smoke are analyzed using GOES-EAST and GOES-WEST Visible satellite imagery.
  - Only a general description of areas of smoke or significant smoke plumes will be analyzed.
  - A quantitative assessment of the density/amount of particulate or the vertical distribution is not included.
  - · Widespread cloudiness may prevent the detection of smoke even from significant fires.

http://www.ssd.ncaa.gov/PS/FIRE/DATA/SMOKE/2014/2014/280224.html

1/1

**Fig A-3:** An excerpt from NASA's Smoke Text Product identified blowing dust across much of southern California, moving southeastward towards the California and Arizona border. Source: http://www.ssd.noaa.gov/PS/FIRE/DATA/SMOKE/2014/2014/280224.html

## FIGURE A-4 IMPERIAL COUNTY DAILY WEATHER ANG AG BURNING INFORMATION

		eptember 27, 2014 er Observations at Imper	ial Airpo	ort (ASO	S) FAA/N	IWS		
LOC	- M-	WINDS MILES PER HOUR	1000000	BILITY LES				
7 A	M 82	SE 8	1	0				
8 A	M 84	SSE 12	1	0				
9 A	M 87	SSE 8	1	0				
10 A	M 91	E 5	1	0				
11 /	M 93	VRBL 3	1	0				
NO	ON 95	ESE 6	1	0				
1 P	M 97	NE 5	1	0				
2 P	M 99	CALM	1	0				
3 P	M 90	1	0					
4 P	M 91	ESE 20	(	6				
5 P	M 89	SE 22G32	1	0				
6 P	M 90	S 8	1	0				
7 P	M 89	S 10	1	0				
	Max. Ter	mperature yesterday was	99 d	egrees				
Today'	s Mt. Signal	Visibility at 7:30 AM CLE	AB NKX	12Z 50	0 MB He	ight _		
Forec	asts		1Y7	12Z 500	MB Hei	ght _		
High	Today _	91		Local Fo	orecast AM Local	)	Computer Forecast (RUC 40KM 12Z)	
Est. Tir	me Mixina H	eight reaches 3000 feet					10:00	
		um Mixing Height				feet	10,76	feet
Foreca	st for Mornir	ng surface winds		W 10 to		mph	W 10 to 15	mph
		oon surface winds	_	W 15 to		mph .	W 15 to 25	mph
		ng surface winds	_	W 15 to		mph		
		PM transport winds	-	W 1		mph		
omments	/Complaints	NO BURN DAY. High	winds u	p to 25	mph.			

**Fig A-4:** A copy of the Imperial County Air Pollution Control District official record of the conditions as they existed for a determination of a "No Burn" day on September 27, 2014

### FIGURE A-5 IMPERIAL VALLEY AIR QUALITY ALERT

### Imperial Valley Air Quality Alert

#### Niland - English Road

Saturday, September 27 - 8:00 AM

PM10 (24-hr average) AQI reached 151 - Unhealthy

PM10 AQI 151-200 People with respiratory or heart disease, the elderly, and children are the groups most at risk, especially when they are physically active. Persons with cardiopulmonary disease and the elderly may experience increased aggravation of heart or lung disease and premature mortality. The general population may experience increased respiratory effects. U.S. EPA cautions that "people with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion." 'Prolonged' generally means four or more hours with short rest periods. 'Heavy exertion' is that which would increase the resting breathing rate four fold or greater. You can reduce exposure to particulate material by: - Reducing the intensity and duration of your outdoor activities - Postponing outdoor activities to days when particulate levels are lower

#### Current Maximum AQI for Other Imperial Valley Cities

Brawley - 220 Main Street: Moderate (PM10)

Calexico - Ethel Street: Moderate (PM2.5)

El Centro - 9th Street: Good (Ozone)

This notification was issued by the Imperial Valley Air Pollution Control District. Visit http://www.imperialvalleyair.org for current readings, ozone movies, and additional air quality information.

All observational data on this web site are not verified or validated and should be considered preliminary. From time to time error codes are included into the calculations for the AQI – for verification please contact the Air District office.

To change your AirAlert subscription, go to http://www.imperialvalleyair.org/airalert.cfm For more information on how the AQI is calculated, visit Air Now.

Fig A-5: A copy of the air quality alert for the Niland monitor warning of unhealthy air quality levels. Although the Niland monitor did not exceed  $PM_{10}$  concentrations increased sufficient to affect air quality.

### FIGURE A-6 IMPERIAL COUNTY AFFIDAVIT 30 DAY PUBLIC NOTICE

### AFFIDAVIT OF PUBLICATION (2015.5 C.C.P.)

#### STATE OF CALIFORNIA

County of Imperial

I am a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk\* of the printer of the

#### Imperial Valley Press

a newspaper of general circulation, printed and published daily in the City of El Centro, County of Imperial and which newspaper has been adjudged a newspaper of genera circulation by the Superior Court of the County of Imperial, State of California, under the date of October 9, 1951, Case Number 26775; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

SIGNATURE

Name of Account: I C AIR POLLUTION

CONTROL

Order Number: 11158770 Ad Number: 31381984

\* Printer, Foreman of the Printer, or Principal Clerk of

the Printer

Date: 12 th day of March, 2018. at El Centro, California.

This space is for the County Clerk's Filling Stamp:

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				ARROLLING	S CUSTIN	OR, DEST	BIKTE	ke What I e			
		OF	THE DE	MONSTRATI	ON O	F TH	E OCCL	JRRENCE			
			OF E	GHT EXCEP	TION	AL E	VENTS	(EE)			
The Imperial C Event (EE) De tions at the Air by a Federal R (FEM) represen	monst District eferen	ration of air r ce Me	s, which monitoring thod mon	support the r g sites. Liste nitor (FRM) or	eques	ted e	date, si	of measured te and concen	24-ho tration	our co	ncentra
2014				2015				2016			
June 26 -Brawley	FEM	185	ug/m³	December 14 Brawley El Centro	FRM FRM	222 165	ug/m³	September 3 Brawley El Centro	FEM FEM	275 174	ug/m³ ug/m³
July 16 Westmorland	FRM	167	ug/m³	Niland Westmorland Brawley	FRM FRM FEM	250 193 208	ug/m³ ug/m² ug/m²	Westmorland September 12	FEM	202	ug/m³
September 27				El Centro	FEM	201	ug/m³	September 13	bne		
Brawley	FEM	219	ue/m³	Westmorland	FEM	183	ug/m³	Brawley	FEM	232	ug/m³
			- 3000					Westmorland	FEM	164	ug/m³
2016				2016				Brawley	FEM	180	ug/m³
October 30 Brawley	FEM	162	ug/m³	December 16 Brawley	FEM	645	ug/m³	El Centro	FEM	179	ug/m³
вгамицер	FEIVI	102	ogitti	Catexico	FEM	238	ug/m³				
				El Centro	FEM	207	ug/m³				
				Niland	FEM	530	ug/m³				
				Westmorland	FEM	733	ug/m <sup>5</sup>				
The public and ed above. The 2015 and 2016 of an aerodyne ed PM10 into t vide the scient comments for submitting com	ese de 3 Air D amic si he reg dific jus 30 day	monst istrict ze les ion aff itificati is com	rations p air monit s than 10 ecting Ri on for th mencing	rovide the sup ors were affect or microns (PM verside, Impe e requested et the date of the	oportin cted b 110). rial an exclusi ne pub	y ent Wind d Sai lons.	idence the rained estate associated in Diego of The Air	nat on the days levated levels lated with a we counties. The District is soli	of par eather eight I citing	ated ticulate event Draft E	for 2014 te matte t entrain EE's pro accepting
The eight Dra www.co.imperi visit the Air Po tions or conce for Monlea N. S	al.ca.u llution ms ple	Contrase fe	er "Air P	ollution". To v	view a S. 9tl	hard Stre	copy of et, El C	any of the eigi entro. Should	ht Dra you h	ft EE's	s, pleasi ny ques
L828								M11			
			- 1 St. 1								

**Fig A-6:** A copy of the Imperial County Air Pollution Control District official record (affidavit) affirming the publication of the notice of availability of the Exceptional Event Demonstration for September 27, 2014. The date for closing comments was April 11, 2018

## FIGURE A-7 IMPERIAL COUNTY COMMENTS REGARDING THE SEPTEMBER 27, 2014 EE DEMONSTRATION

The ICAPCD did not receive any comments

TYPE	DATE	TIP	ΜE	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/25/2014	2035	MST	Phoenix	A strong Pacific Storm is forecast to move into the Western States late Friday into the weekend. (9/25/2014 is a Thursday)Still looks to be an active Saturday across the area as an upper trough sweeps through the region The other impact from the approaching trough on Friday will be an increase of the winds across SE CA with sustained southerly to southwesterly winds around 15kts with gusts to 25 knots likely.	85
Area Forecast Discussion	9/25/2014	2120	PDT	San Diego	A lone thunderstorm formed over the Anza Borrego Desert late this afternoon along a low-level convergence boundary The 00Z NAM4 shows the boundary setting up over the San Diego County/Imperial County border around 21Z Friday with SSE winds in the SFC-850 MB layer  Tomorrow will be a cooler day as the trough off the Norcal coast presses southward toward SFO bringing lower heights and stronger onshore flow. The trough barrels across southcentral California Saturday and Sunday bringing greater cooling and a much deeper marine layer	88
Urgent Weather Message	9/25/2014	2151	PDT	San Diego	Wind Advisory remains in effect from 1 pm Friday to 4 am PDT Sunday - Winds west to southwest 25 to 35 mph with gusts of 45 to 55 mph along mountain ridges, desert slopes, through and below canyons and passes and into favored adjacent desert areas. In the Coachella Valley through and below the San Gorgonio pass and north of Interstate 10. Interstate 8 in San Diego County likely to be impacted as well	91
Area Forecast Discussion	9/26/2014	250	MST	Phoenix	Mostly clear skies Otherwise, the large Pacific trough continues on track toward Arizona for Saturday As the Pacific low approaches later today upper level dynamics increase along the Colorado River with dynamics slowly shifting toward Phoenix late night Therefore, our forecast confidence for potential widespread showers and thunderstorms Saturday over parts of southwest and mostly south central Arizona is high.	93

ТҮРЕ	DATE	TIF	ME	AGENCY	DESCRIPTION	PAGE
					A deep upper trough is approaching the northern California coast early this Friday morning. This feature will swing into California later today and become negatively tilted while a closed low develops this afternoon near the San Francisco Bay A cold front out ahead of this systemsome light showers across much of central California	
Area Forecast Discussion	9/26/2014	355	PDT	San Diego	The upper level trough moves into Southern California tonight and Saturday morning with very strong onshore flow and a deep marine layer With the mentioned strong onshore flow coupled with strong pressure gradients between the coast and the upper deserts there will be some strong wind gusts. The best timing for the strongest winds looks to occur Saturday morning through Saturday afternoon across mountains and deserts	96
Area Forecast Discussion	9/26/2014	445	MST	Phoenix	Otherwise the large Pacific trough continues on track toward Arizona for Saturdaywith slight chance of precipitation late in the day over SE CA/SW AZ	99
Urgent Weather Message	9/26/2014	451	PDT	San Diego	Wind Advisory remains in effect from 1 pm to 4 am PDT Sunday - Winds west to southwest 25 to 35 mph with gusts up to 55 mph along mountain ridges, desert slopes, through and below canyons and passes and adjacent deserts. In the Coachella Valley through and below the San Gorgonio pass and north of Interstate 10. Interstate 8 in San Diego County mountains and desert	102
Area Forecast Discussion	9/26/2014	845	PDT	San Diego	Southwest flow throughout the profilethat the lower deserts have values in the e1.4 to 1.6 inch range. Current SPC Meso analysis shows most unstable capes of 500-1000 J/KG in the lower deserts and with stronger onshore flow the local WRF has a potential surface convergence boundary setting up in the deserts this afternoon before moving east of the area late in the afternoon.	103

ТҮРЕ	DATE	TIN	ΜE	AGENCY	DESCRIPTION	PAGE
					There could be just enough lift to create an isolated thunderstorm/shower or two in the lower deserts this afternoon through early evening and possibly over some of the highest mountain peaks The trough will eventually develop into a closed low tonight as it move inland over central California The onshore pressure gradients with strong and gusty southwest to west winds likely occurring over mountain ridges through passes/canyons along desert slopes and into adjacent desert areas this afternoon through early Sunday morning	Cont
Area Forecast Discussion	9/26/2014	900	MST	Phoenix	Moisture moving north from Mexico has brought a warm and very muggy morning to our CWA today The upper low that will be acting on this copious moisture is just about ready to move inland over the SFO Bay area And even across SE CA as the upper low begins to approach that region	106
Air Quality Alert	9/26/2014	1204	MST	Phoenix	Strong and gusty winds is forecast to generate widespread blowing dust that may result in local coarse particle concentrations that pose a health risk.	109
Urgent Weather Message	9/26/2014	1315	PDT	San Diego	Wind Advisory remains in effect until 4 am PDT Sunday - Winds west to southwest 25 to 35 mph with gusts up to 55 mph along mountain ridges, desert slopes, through and below canyons and passes and adjacent deserts. In the Coachella Valley through and below the San Gorgonio pass and north of Interstate 10. Interstate 8 in San Diego County mountains and desert	110
Area Forecast Discussion	9/26/2014	1339	PDT	San Diego	There are also a lot of lenticular clouds around the area which is an indication of turbulence and strong westerly flow southwest flow throughout the profile Lower desertsmeso analysis shows most unstable capes in the lower deserts and with the stronger onshore flow the local WRF has a potential surface convergence boundary setting up in the deserts this afternoon before moving east of the area late in the afternoon	111

ТҮРЕ	DATE	TIF	ME	AGENCY	DESCRIPTION	PAGE
					This will result in the continued strengthening of the onshore pressure gradients with strong and gusty southwest to west winds likely occurring over mountain ridges through passes/canyons along desert slopes and into adjacent desert areas this afternoon through early Sunday morning.	Cont
Special Weather Statement	9/26/2014	1415	MST	Phoenix	At 213 PM PDT NWS meteorologists detected strong thunderstorms along a line extending from 17 miles northeast of Brawley to 8 miles north of Holtville to Calexico and moving north at 25 mph	114
Bulletin - Severe Thunderstorm Warning	9/26/2014	1425	MST	Phoenix	At 219 PM PDT NWS meteorologists detected a severe thunderstorm capable of producing damaging winds in excess of 60 mph. In addition, areas of blowing dust and heavy rainfall may accompany this severe storm. This storm was located near Alamorio or 8 miles east of Brawley and moving northeast at 20 mph	115
Bulletin - Severe Thunderstorm Warning	9/26/2014	1441	MST	Phoenix	At 235 PM PDT NWS meteorologists detected a severe thunderstorm capable of producing dime size hail and damaging winds in excess of 60 mph. This storm was located near Holtville or 7 miles east of Imperial and moving north at 15 mph	116
Bulletin - Severe Thunderstorm Warning	9/26/2014	1457	MST	Phoenix	At 252 PM PDT NWS meteorologists detected a severe thunderstorm capable of producing penny size hail and damaging winds in excess of 60 mph. This storm was located 27 miles southwest of Nicholls Warm Springs or 28 miles southeast of Desert Center and moving northeast at 15 mph	117
Area Forecast Discussion	9/26/2014	1500	MST	Phoenix	And a weak disturbance moving northward from northern Mexico is now beginning to trigger scattered thunderstorms across Pima County with some cells moving northward into SW Maricopa County this hourThe main event which is a strong Pacific low center is still expected to begin to impact our CWA beginning late tonight then continue into early Sunday	118
					Activity across the western portion of our CWA late tonight mainly across the CO River Valley and over La Paz County. The main issue with these storms will again be heavy rain and gusty winds and local flooding	

ТҮРЕ	DATE	TIN	ΛE	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/26/2014	1512	MST	Phoenix	Updated aviationExpect shower and thunderstorm activity across the area this afternoon/evening persisting overnight into Saturday and visibility briefly lower with surface wind gusts up to 55kt possible along with hail. Lighter winds anticipated overnight	121
Hazardous Weather Outlook	9/26/2014	1517	MST	Phoenix	Imperial County/Extreme southeast California. Scattered showers and thunderstorms to continue into the evening hours across the region. Locally heavy rain gusty winds and blowing dust is possible	124
Bulletin - Severe Thunderstorm Warning	9/26/2014	1520	MST	Phoenix	At 314 PM PDT NWS meteorologists detected a severe thunderstorm capable of producing dime size hail and damaging winds in excess of 60 mph. This storm was located 6 miles east of Holtville or 15 miles northeast of Calexico and moving northeast at 15 mph	125
Flood Advisory	9/26/2014	1548	MST	Phoenix	At 345 PM PDT thunderstorms over the advisory area have produced heavy rain. Doppler radar estimates that one to one and one half inches of rain has fallen since 230 PM this afternoon. This will cause normally dry washes to begin running as well as ponding of water on roadways and low lying areas.	126
Severe Weather Statement	9/26/2014	1604	PDT	Phoenix	The thunderstorm over central Imperial County has decreased in intensity. The warning that was in effect will therefore be allowed to expire. Heavy rain and lightning are still possible with this storm	127
Urgent Weather Message	9/26/2014	1632	MST	Phoenix	Blowing dust advisory in effect until 6 pm MST this evening-Blythe, Brawley, Calexico and El Centro. Affected area interstate corridor between El Centro in south central Imperial County and southwest Yuma County	128
Urgent Weather Message	9/26/2014	1801	MST	Phoenix	Blowing dust advisory has expired-Blythe, Brawley, Calexico and El Centro.	129
Area Forecast Discussion	9/26/2014	2020	MST	Phoenix	Radar and Satellite trends indicate new isolated convection is beginning to form across eastern Arizona along the Colorado River and south of Yuma over Sonora in an area of leftover elevated instability. The upper low forecast to move through the region on Saturday and its associated forcing and shear remain well to our west this evening still located over central California as of 03Z	130

ТҮРЕ	DATE	TIN	ΜE	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/26/2014	2130	PDT	San Diego	Strong thunderstorm erupted in the unstable airmass over Imperial County this afternoon This trough develops into a closed low overnight with several strong vort maxes pinwheeling around the closed low this weekendGusty mountain and desert winds are likely. The Jet core aloft, stronger mid-level westerly winds and increasing onshore surface gradients all lend support to a wind advisory Strongest winds will funnel through the San Gorgonio Pass into the northern Coachella Valley.	133
Urgent Weather Message	9/26/2014	2154	PDT	San Diego	Wind Advisory remains in effect until 4 am PDT Sunday. Strong and gusty west to southwest winds in the mountains and deserts of Riverside and San Diego Counties through early Sunday morning.	135
Area Forecast Discussion	9/27/2014	230	MST	Phoenix	A massive cool Pacific low-pressure system continued to move toward Arizona early this morning. Thanks to the Yuma proving grounds multiple late Friday afternoon weather balloons were launched detecting this moisture plume and showing moisture levels were excessive below 8 thousand feetAs the Pacific trough slowly advances toward Arizona this morning and afternoon strong upper level diffluent flow over the rich low level moisture plume will generate widespread showers and thunderstorms over parts of southwest and south central Arizona today	136
Area Forecast Discussion	9/27/2014	357	PDT	San Diego	The closed upper low pressure was centered near Modesto early this morning. The upper low will move east into Nevada through tonight. Two somewhat strong shortwaves will pass over southern California this afternoon and evening and a narrow ribbon of low to mid-level moisture will accompany these features  Onshore pressure gradients and U/L jet will continue to bring strong and gusty west winds to the Riverside and San Diego County Mountains and deserts through late tonight. Wind gusts have already reached around 60 mph in our most wind prone locations	139
Preliminary Local Storm Report	9/27/2014	434	PDT	San Diego	Measured wind gusts Indian Wells-Palm Desert 50 mph and Cathedral City 49 mph	142

ТҮРЕ	DATE	TIN	ΛE	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/27/2014	451	MST	Phoenix	A strong Pacific storm is forecast to move through the region today. Increased southwesterly and diffluent Jetstream winds continued to develop widespread convection and heavy rain over northwest Arizona overnight.	143
Urgent Weather Message	9/27/2014	524	PDT	San Diego	Wind Advisory remains in effect until 4 am PDT Sunday. Strong and gusty west to southwest winds in the mountains and deserts of Riverside and San Diego Counties through late tonight.	146
Area Forecast Discussion	9/27/2014	910	MST	Phoenix	Storm activity has been greater over La Paz and Yuma counties near the advancing cool front. Yuma airport and Blythe airport metars indicate that the front has passed the lower Colorado River Valley change in wind direction and drop in dew points as of this writing	147
Area Forecast Discussion	9/27/2014	1010	PDT	San Diego	Water vapor imagery shows an impressive upper level low centered over the San Joaquin Valley this morning with the associated line of thunderstorms pushing east into Utah and Arizona this morning. The main weather concern today will be with the gusty winds in the mountains and deserts. At this time the models are showing the onshore gradients increasing	150
Special Weather Statement	9/27/2014	1149	MST	Phoenix	At 1147 AM MST NWS meteorologist detected a strong thunderstorm 5 miles southeast of Mohawk moving northeast at 25 mph. Locations Mohawk, Dateland and Paloma	153
Area Forecast Discussion	9/27/2014	1315	PDT	San Diego	The main impacts of this upper level low across the southland are the cooler temperatures and the gusty west winds in the mountains and desertsThe onshore surface gradients are once again on the rise this afternoonAt this time most of the locations across the mountains and deserts are gusting between 30 and 40 mph with the windiest locations gusting to around 50 mph.	154
Urgent Weather Message	9/27/2014	1325	PDT	San Diego	Wind Advisory remains in effect until 4 am PDT Sunday. Strong and gusty west to southwest winds in the mountains and deserts of Riverside and San Diego Counties through late tonight.	157

ТҮРЕ	DATE	TIP	ΛE	AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/27/2014	1440	MST	Phoenix	Satellite and radar data show a north-south oriented corridor of precipitation over the Central third of Arizona early this afternoonDynamical forcing associated with the upper trough centered over California and Nevada will also aid in the lift	158
Area Forecast Discussion	9/27/2014	2050	MST	Phoenix	Earlier in the afternoon very potent cold front/squall line pushed east across South Central Arizona and the effects of the squall line hit the greater Phoenix area head onvery strong outflow signatures in excess of 50kt in many locations	164
Urgent Weather Message	9/27/2014	2056	PDT	San Diego	Wind advisory is cancelled	167
Area Forecast Discussion	9/27/2014	2106	PDT	San Diego	Earlier today winds were gusting 45 to over 50 mph in the wind prone areas of the deserts and mountains. With the pressure gradients trending offshore now and only isolated wind gusts of 40 mph or more the wind advisory has been cancelled.	168

7 392 FXUS65 KPSR 260335 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
835 PM MST THU SEP 25 2014

#### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE INTO THE WESTERN STATES LATE FRIDAY INTO THE WEEKEND...WHICH WILL RESULT IN AN INCREASED CHANCE OF SHOWERS AND THUNDERSTORMS ACROSS THE AREA. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY GUSTY WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER AND BELOW NORMAL TEMPERATURES ARE FORECAST FROM LATE SUNDAY NIGHT THROUGH AT LEAST THE MIDDLE OF NEXT WEEK.

#### &&

#### .DISCUSSION...

MID EVENING WATER VAPOR IMAGERY AND RADAR CONTINUE TO SUGGEST A WEAK TROUGH MOVING THROUGH EASTERN ARIZONA THIS EVENING. THIS TROUGH IN COMBINATION WITH INCREASED BL MOISTURE KICKED OFF A FEW STRONG SHOWERS ACROSS GILA COUNTY THIS EVENING AND WHILE A FEW SHOWERS REMAIN ON THE RADAR AS OF 0330Z...STORMS HAVE QUIETED DOWN SUBSTANTIALLY SINCE SUNSET. MEANWHILE WEAK MID-LEVEL SPEED CONVERGENCE OFF THE CALIFORNIA COAST RESULTED IN SOME VERY ISOLATED SHOWERS ACROSS SOUTHEAST CALIFORNIA. THESE TOO HAVE DIED OFF SUBSTANTIALLY SINCE SUNSET.

CONVECTION SHOULD CONTINUE TO DISSIPATE OVERNIGHT AND THE FORECAST IS IN GOOD SHAPE OVERALL. MADE SOME MINOR ADJUSTMENT TO SKY/TEMPS/DEWPOINTS BASED ON OBSERVATIONS THROUGH 03Z BUT OTHERWISE THINGS REMAIN ON TRACK. STILL LOOKS TO BE AN ACTIVE SATURDAY ACROSS THE AREA AS AN UPPER TROUGH SWEEPS THROUGH THE REGION.

#### &&

#### .PREVIOUS DISCUSSION...

NOTE...FORECAST CONFIDENCE IS CONTINUING TO INCREASE WITH REGARDS TO A GOOD CHANCE OF SHOWERS/THUNDERSTORMS OVER SOUTH CENTRAL AZ...INCLUDING PHOENIX ON SATURDAY MORNING AND AFTERNOON...WITH POSSIBLE LOCALLY HEAVY RAIN...STRONG WINDS...AND HAIL.

#### TONIGHT THROUGH FRIDAY...

THE HRRR AND GFS ARE ALSO SHOWING THE DEVELOPMENT OF ISOLATED SHOWERS/THUNDERSTORMS OVER THE HIGHER TERRAIN EAST OF PHOENIX FRIDAY AFTERNOON/EVENING. THE OTHER IMPACT FROM THE APPROACHING TROF ON FRIDAY WILL BE AN INCREASE OF THE WINDS ACROSS SE CA...WITH SUSTAINED SOUTHERLY TO SOUTHWESTERLY WINDS AROUND 15KTS...WITH GUSTS TO 25 KNOTS LIKELY.

#### FRIDAY NIGHT THROUGH SUNDAY...

September 27, 2014, Exceptional Event, Imperial County
LATEST MODEL SUITES CONTINUE TO ADVERTISE A MAJOR EARLY FALL
STORM...WHICH WILL BE MOVING INTO THE DESERT SOUTHWEST BEGINNING
LATE FRIDAY NIGHT...AND CONTINUING INTO SUNDAY. THIS MORNING/S 12Z
MODEL SUITES ARE VERY SIMILAR TO LAST NIGHT/S 00Z...WHICH BEGIN TO
INCREASE POPS ACROSS THE REGION LATE FRIDAY/EARLY SAT MORNING AS
UPPER-LEVEL DIFLUENCE INCREASES AND WINDS ALOFT INCREASE...WITH BULK
SHEAR VALUES RISING INTO THE 30-50KT RANGE ACROSS THE REGION BY
EARLY SATURDAY. THESE DYNAMICS...COMBINED WITH PWATS IN THE 1.50-175
INCH RANGE ARE EXPECTED TO PRODUCE SCATTERED-NUMEROUS
SHOWERS/TSTMS ACROSS THE REGION...WITH A FEW OF THESE CELLS
APPROACHING/REACHING SEVERE LIMITS. SHOWER/TSTM COVERAGE IS THEN
EXPECTED TO CONTINUE TO INCREASE THROUGH THE DAY ON SATURDAY AS THE
UPPER LOW MOVES INTO SOUTHERN NV. ALTHOUGH MOISTURE AND WIND SHEAR

PARAMETERS ARE LOOKING FAVORABLE FOR THE DEVELOPMENT OF SEVERE STORMS...ONLY MINIMAL COOLING IS EXPECTED IN THE MID LEVELS...WITH 500MB TEMP FORECAST TO FALL ONLY ABOUT 3 DEGREES C...FROM AROUND -6C TO -9C...WHICH WILL LIKELY PUT A CAP ON THE AMOUNT OF SEVERE STORM ACTIVITY THAT WE WILL SEE. THE FLAGSTAFF CWA...ON THE OTHER HAND...IS EXPECTED TO SEE MUCH BETTER COOLING ALOFT...WITH 500MB TEMPS FALLING INTO THE -10-15C RANGE...GIVING THAT REGION A MUCH BETTER CHANCE FOR WIDESPREAD SEVERE STORM ACTIVITY.

AS FAR AS RAINFALL AMOUNT ARE CONCERNED...THE MODELS SEEMS TO BE CONVERGING TOWARDS AMOUNTS IN THE 0.50-1.00 INCH RANGE OVER THE LOWER ELEVATIONS OF SOUTH-CENTRAL ARIZONA...WITH HIGHER AMOUNTS TO THE NORTH AND EAST. AFTER SOME LINGERING SHOWER ACTIVITY ACROSS SOUTH-CENTRAL AZ EARLY SUNDAY MORNING...A FAIRLY RAPID CLEARING TREND FROM WEST TO EAST IS THEN EXPECTED TO OCCUR DURING THE DAY ON SUNDAY AS THE SFC FRONT MOVES THROUGH AND DRIER AIR MOVES IN FROM THE WEST. HOWEVER...ISOLATED TO SCATTERED SHOWER ACTIVITY COULD LINGER INTO SUNDAY NIGHT OVER THE HIGHER TERRAIN OF SOUTHERN GILA COUNTY DUE TO FAVORABLE UPSLOPE FLOW AND A WEAK SHORTWAVE ROTATING AROUND THE MAIN UPPER LOW CENTER ACROSS THE REGION.

#### .MONDAY THROUGH THURSDAY...

DRY WEATHER WITH NEAR...OR SLIGHTLY BELOW NORMAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA AS WESTERLY FLOW ALOFT CONTINUES TO IMPORT DRY AIR INTO THE REGION.

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#### .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

FEW-SCT CLOUDS EXPECTED AT ALL SITES THROUGH THE OVERNIGHT HOURS. WINDS WILL INCREASE THROUGH THE DAY FRIDAY ALONG WITH STORM CHANCES. WILL INTRODUCE PROB30S INTO THE TAFS FOR THE LATE AFTERNOON/EVENING TIMEFRAME. TIMING WILL BE DIFFICULT TO PIN DOWN EXACTLY BUT BEST CHANCES SHOULD BE AFTER 22Z FRIDAY.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

September 27, 2014, Exceptional Event, Imperial County

.FIRE WEATHER...

SUNDAY THROUGH THURSDAY...

SHOWERS AND THUNDERSTORMS...MAINLY EAST OF PHOENIX...ARE POSSIBLE ON SUNDAY AS AN UPPER LEVEL TROUGH LINGERS OVER THE REGION. DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD.

AFTERNOON MINIMUM HUMIDITY LEVELS WILL AVERAGE AROUND 20 PERCENT ON SUNDAY...AND THEN TREND TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH ON SUNDAY...THOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

THURSDAY.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...LEINS/PERCHA/VASQUEZ AVIATION...LEINS FIRE WEATHER...MCLANE



College of Ag

Department of Agronomy

#### **Department of Agronomy**

716 Farm House Ln Ames, IA 50011 600

9/14/2018

FXUS66 KSGX 260425

**AFDSGX** 

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
920 PM PDT THU SEP 25 2014

.SYNOPSIS...

COOLING THROUGH SATURDAY AS A TROUGH MOVES INLAND ACROSS CENTRAL CALIFORNIA. THE MARINE LAYER WILL GRADUALLY DEEPEN THROUGH FRIDAY NIGHT WHEN LOW CLOUDS WILL SPREAD ACROSS THE INLAND VALLEYS. PATCHY DRIZZLE IS LIKELY WEST OF THE MOUNTAINS SATURDAY MORNING. THIS TROUGH WILL ALSO BRING GUSTY WEST WINDS OVER THE MOUNTAINS AND DESERTS FRIDAY AFTERNOON THROUGH SATURDAY NIGHT. THE WEATHER WILL TURN SLIGHTLY WARMER EARLY NEXT WEEK.

&&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

A LONE THUNDERSTORM FORMED OVER THE ANZA BORREGO DESERT LATE THIS AFTERNOON ALONG A LOW-LEVEL CONVERGENCE BOUNDARY. THE FORECAST CHALLENGE THIS EVENING IS DETERMINING WHERE THE BOUNDARY WILL SET UP FRIDAY AFTERNOON. THE 00Z NAM4 SHOWS THE BOUNDARY SETTING UP OVER THE SAN DIEGO COUNTY/IMPERIAL COUNTY BORDER AROUND 21Z FRIDAY WITH SSE WINDS IN THE SFC-850 MB LAYER. PRECIPITABLE WATER OF 1.70" IS FORECAST OVER THIS AREA ALONG WITH CAPE VALUES BETWEEN 1000-1500 J/KG. SO WHILE IT IS LIKELY THAT THUNDERSTORMS WILL FORM FRIDAY AFTERNOON...THE QUESTION IS JUST WHERE THEY WILL FORM. WILL FORM OVER THE ANZA BORREGO DESERT...OR WILL THEY FORM OVER WESTERN IMPERIAL COUNTY? HAVE OPTED TO ADD A SLIGHT CHANCE OF AFTERNOON THUNDERSTORMS OVER THE SAN DIEGO COUNTY DESERTS TOMORROW AFTERNOON WITH THE BEST CHANCES BETWEEN 2-6PM. AFTER 6 PM...THE BOUNDARY IS FORCED EAST OVER IMPERIAL COUNTY FROM THE INCREASING SOUTHWESTERLY STEERING FLOW AHEAD OF THE LONG WAVE TROUGH APPROACHING SOUTHERN CALIFORNIA.

SKIES WERE MOSTLY CLEAR THIS EVENING AND IT WAS WARM ONCE AGAIN WITH TEMPS IN THE 70S AND LOW 80S IN MOST AREAS WEST OF THE MOUNTAINS. LINDBERGH FIELD WAS 78 DEGREES AT 8 PM. IT WILL BE ANOTHER WARM NIGHT WITH MORE RECORD HIGH MINIMUM TEMPS LIKELY. COASTAL LOW CLOUDS WERE STILL WELL OFFSHORE. A LATE ARRIVAL IS ANTICIPATED AT THE COAST TONIGHT.

TOMORROW WILL BE A COOLER DAY AS THE TROUGH OFF THE NORCAL COAST PRESSES SOUTHWARD TOWARD SFO BRINGING LOWER HEIGHTS AND STRONGER ONSHORE FLOW. THE TROUGH BARRELS ACROSS SOUTHCENTRAL CALIFORNIA SATURDAY AND SUNDAY BRINGING GREATER COOLING AND A MUCH DEEPER MARINE LAYER. DRIZZLE IS POSSIBLE WEST OF THE MTNS SATURDAY MORNING AS THE MARINE LAYER DEEPENS TO 4000-4500 FEET. AN UNSEASONABLY

Appendix A

9/14/2018 IEM :: AFD from NWS SGX

Appendix A

September 27, 2014, Exceptional Event, Imperial County STRONG 95 KT 300 MB JET MAX TRACKS OVER SOCAL SATURDAY AFTERNOON. SOME OF THIS WIND ENERGY WILL MIX TOWARD THE SURFACE AND COMBINE WITH STRONGER ONSHORE PRESSURE GRADIENTS TO BRING GUSTY WEST WINDS TO THE MTNS AND DESERTS. A WIND ADVISORY IS IN EFFECT FOR THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES FRIDAY AFTERNOON THROUGH SATURDAY NIGHT.

THE LOW WILL LIFT NORTHEAST SUNDAY WITH BRIEFLY HIGHER
HEIGHTS...MINOR WARMING AND A SHALLOWER MARINE LAYER MONDAY AND
TUESDAY. A TRANSITORY WEAK TROUGH WEDNESDAY WILL BE FOLLOWED BY AN
OFFSHORE FLOW PATTERN THAT LOOKS FAIRLY WEAK AT THIS TIME FOR WARMER
DAYS THURSDAY AND FRIDAY.

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#### .AVIATION...

260415Z...COAST/VALLEYS...MOSTLY CLEAR WITH UNRESTRICTED VIS THROUGH THIS EVENING. STRATUS WILL DEVELOP LATE TONIGHT...MOST LIKELY AFTER 09Z ALONG THE COAST...POSSIBLY SPREADING 15-20 MI INLAND AFTER 13Z. TIMING IS LOW CONFIDENCE AT COASTAL AIRPORTS. BASES WILL MOST LIKELY BE 1000-1500 FT MSL WITH TOPS TO 2000 FT...AND MOST VIS WILL REMAIN ABOVE 5 MI. MOST AREAS SHOULD CLEAR BY 17Z FRI. STRATUS WILL DEVELOP AGAIN LATE FRI AFTERNOON OR EARLY FRI EVENING WITH BASES MOSTLY ABOVE 2000 FT MSL.

MOUNTAINS/DESERTS...CUMULUS/TOWERING CUMULUS WILL DEVELOP AGAIN FRI AFTERNOON WITH BASES AROUND 9000 FT MSL. THERE IS A SLIGHT CHANCE OF A THUNDERSTORM IN THE DESERTS OF SAN DIEGO COUNTY.

OTHERWISE...MOSTLY CLEAR SKIES WITH UNRESTRICTED VIS WILL CONTINUE THROUGH FRI EVENING.

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#### .MARINE...

915 PM...NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT WILL OCCUR IN THE OUTER COASTAL WATERS FRIDAY AFTERNOON AND EVENING...STRONGEST NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY FOR WINDS IS IN EFFECT FRIDAY AFTERNOON/EVENING FOR THE OUTER WATERS. OTHERWISE...NO MARINE HAZARDOUS ARE EXPECTED THROUGH TUESDAY.

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#### .SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

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#### .SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY FROM 1 PM FRIDAY TO 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY...RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN DIEGO COUNTY MOUNTAINS.

PZ...SMALL CRAFT ADVISORY FOR WINDS FROM 1 PM FRIDAY TO 2 AM PDT

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9/14/2018

WWUS76 KSGX 260451

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 951 PM PDT THU SEP 25 2014

...STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS FRIDAY AFTERNOON THROUGH EARLY SUNDAY...

.A TROUGH OF LOW PRESSURE MOVING INLAND OVER CENTRAL CALIFORNIA WILL BRING STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES FRIDAY AFTERNOON THROUGH EARLY SUNDAY. STRONGEST WINDS WILL SURFACE SATURDAY AFTERNOON AND EVENING WITH PEAK GUSTS OF 45 TO 55 MPH THROUGH THE SAN GORGONIO PASS AND THE NORTHERN COACHELLA VALLEY.

CAZ056-058-061-062-261300-

/O.CON.KSGX.WI.Y.0047.140926T2000Z-140928T1100Z/
RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINSCOACHELLA VALLEY-SAN DIEGO COUNTY DESERTS951 PM PDT THU SEP 25 2014

...WIND ADVISORY REMAINS IN EFFECT FROM 1 PM FRIDAY TO 4 AM PDT SUNDAY...

A WIND ADVISORY REMAINS IN EFFECT FROM 1 PM FRIDAY TO 4 AM PDT SUNDAY.

- \* WINDS...WEST TO SOUTHWEST 25 TO 35 MPH WITH GUSTS OF 45 TO 55 MPH
- \* TIMING...FRIDAY AFTERNOON THROUGH EARLY SUNDAY MORNING. THE STRONGEST WINDS WILL SURFACE SATURDAY AFTERNOON AND EVENING.
- \* LOCATION...ALONG MOUNTAIN RIDGES...DESERT SLOPES...THROUGH AND BELOW CANYONS AND PASSES...AND INTO FAVORED ADJACENT DESERT AREAS. IN THE COACHELLA VALLEY...THROUGH AND BELOW THE SAN GORGONIO PASS AND NORTH OF INTERSTATE 10. INTERSTATE 8 IN SAN DIEGO COUNTY LIKELY TO BE IMPACTED AS WELL.
- \* VISIBILITY...LOCALLY REDUCED TO 3 MILES OR LESS IN BLOWING DUST.
- \* IMPACTS...THE WINDS WILL MAKE FOR DIFFICULT DRIVING
  CONDITIONS...ESPECIALLY FOR HIGH PROFILE VEHICLES. WATCH FOR
  BROKEN TREE LIMBS.
- \* OUTLOOK...WINDS WILL DIMINISH BY LATE SUNDAY MORNING AS ONSHORE FLOW WEAKENS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Appendix A

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941 FXUS65 KPSR

FXUS65 KPSR 260950 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
250 AM MST FRI SEP 26 2014

#### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE INTO THE WESTERN STATES LATE TODAY INTO THE WEEKEND...WHICH WILL RESULT IN AN INCREASED CHANCE OF SHOWERS AND THUNDERSTORMS. SOME OF THE STRONGER STORMS IN SOUTH CENTRAL ARIZONA WILL BE CAPABLE OF PRODUCING LOCALLY GUSTY WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST FROM LATE SUNDAY NIGHT THROUGH THE MIDDLE OF NEXT WEEK.

&&

#### .DISCUSSION...

NOTE...FORECAST CONFIDENCE CONTINUES TO INCREASE WITH REGARDS TO A GOOD CHANCE OF SHOWERS/THUNDERSTORMS OVER SOUTH CENTRAL AZ... INCLUDING PHOENIX SATURDAY MORNING AND AFTERNOON WITH POSSIBLE HEAVY RAIN.

#### TODAY AND SATURDAY...

MOSTLY CLEAR SKIES WERE NOTED ACROSS THE ENTIRE FORECAST...SOUTHEAST CA TO SOUTH CENTRAL AZ EARLY THIS MORNING. OTHERWISE THE LARGE PACIFIC TROF CONTINUES ON TRACK TOWARD AZ FOR SATURDAY. THE FAVORED GFS MODEL CONTINUES TO BE REMARKABLY CONSISTENT WITH ITS IMPACT OVER OUR FORECAST AREA MAINLY LATE NIGHT...BUT PARTICULARLY SATURDAY.

THEREFORE THERE IS NOT MUCH CHANGE IN FORECAST THINKING FROM YESTERDAY. INCREASING CLOUDS ARE EXPECTED ACROSS THE FORECAST AREA TODAY...WITH A SLIGHT CHANCE OF PRECIP LATE IN THE DAY OVER SOUTHEAST CA/SOUTHWEST AZ...AND OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY ZONE 24.

AS THE PACIFIC LOW APPROACHES LATER TODAY...UPPER LEVEL DYNAMICS INCREASE ALONG THE COLORADO RIVER...WITH DYNAMICS SLOWLY SHIFTING TOWARD PHOENIX LATE NIGHT. THEREFORE PRECIP PROBABILITIES ACROSS THE FORECAST AREA WILL BE MUCH HIGHER OVER LA PAZ COUNTY IN SOUTHWEST AZ TONIGHT.

DEVELOPING STORM DYNAMICS UNDER INCREASING MONSOON MOISTURE WILL BE STRONGEST OVER SOUTH CENTRAL AZ...INCLUDING PHOENIX SATURDAY MORNING AND EARLY AFTERNOON. THERE CONTINUES TO BE POTENTIAL FOR HEAVY RAIN WITH CONVECTIVE STORMS. IN FACT THE STORM PREDICTION CENTER HAS ISSUED A SLIGHT RISK FOR SEVERE THUNDERSTORMS IN NORTHERN AND CENTRAL AZ...INCLUDING PHOENIX SATURDAY AFTERNOON. BELOW IS AN EXCERPT FROM THEM ISSUED THURSDAY EVENING AT 1131 PM CDT.

WITH 50KT+ 500MB SPEED MAX FORECAST TO OVERSPREAD THE COLD

September 27, 2014, Exceptional Event, Imperial County FRONT...SFC-6KM BULK SHEAR VALUES ARE SEASONALLY STRONG AND SHOULD SUPPORT ORGANIZED POTENTIALLY ROTATING STORMS.

ENVIRONMENTAL CONDITIONS APPEAR FAVORABLE FOR ISOLATED SUPERCELLS...ESPECIALLY IF BUOYANCY IS AT OR GREATER THAN CURRENTLY FORECAST. LARGE HAIL...LOCALLY DAMAGING WINDS AND

THEREFORE OUR FORECAST CONFIDENCE FOR POTENTIAL WIDESPREAD SHOWERS AND THUNDERSTORMS SATURDAY OVER PARTS OF SOUTHWEST AND MOSTLY SOUTH CENTRAL AZ IS HIGH. HOWEVER BECAUSE OF THE NATURE OF FAST MOVING HIT AND MISS THUNDERSTORMS...THE PREDICTION OF RAINFALL AMOUNTS IS NOT

PERHAPS AN ISOLATED TORNADO ARE POSSIBLE WITH STRONGEST

AS CLEAR WITH REGARDS TO FLOOD OR FLASH FLOODING.

SHOWER POTENTIAL WILL MOVE INTO EASTERN AZ SATURDAY EVENING WITH THE THE COLD FRONT...I.E. OVER SOUTHERN GILA COUNTY ZONE 24. CLEARING SKIES ARE EXPECTED OVER SOUTHWEST AND SOUTH CENTRAL AZ LATE SATURDAY EVENING AND NIGHT.

#### SUNDAY...

A MUCH DRIER AIRMASS FOLLOWING THE COLD FRONT WILL SPREAD ACROSS SOUTHEAST CA...SOUTHWEST AND SOUTH CENTRAL AZ SUNDAY. HOWEVER... DEEP MOISTURE WILL CONTINUE TO REMAIN ALONG THE EASTERN AZ BORDER UNTIL SUNDAY NIGHT. A THREAT OF SHOWERS AND THUNDERSTORMS WILL LINGER OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY ON SUNDAY.

#### MONDAY THROUGH WEDNESDAY...

DRY WEATHER WITH NEAR SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

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#### .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

FEW-SCT CLOUDS EXPECTED AT ALL SITES THROUGH THE OVERNIGHT HOURS. WINDS WILL INCREASE THROUGH THE DAY FRIDAY ALONG WITH STORM CHANCES. WILL INTRODUCE PROB30S INTO THE TAFS FOR THE LATE AFTERNOON/EVENING TIMEFRAME. TIMING WILL BE DIFFICULT TO PIN DOWN EXACTLY BUT BEST CHANCES SHOULD BE AFTER 22Z FRIDAY.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

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#### .FIRE WEATHER...

SUNDAY THROUGH THURSDAY...

SHOWERS AND THUNDERSTORMS...MAINLY EAST OF PHOENIX...ARE POSSIBLE ON SUNDAY AS AN UPPER LEVEL TROUGH LINGERS OVER THE REGION. DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD.

AFTERNOON MINIMUM HUMIDITY LEVELS WILL AVERAGE AROUND 20 PERCENT ON SUNDAY...AND THEN TREND TO AROUND 15 PERCENT BY THURSDAY. IN

September 27, 2014, Exceptional Event, Imperial County ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH ON SUNDAY...THOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...VASQUEZ
AVIATION...LEINS
FIRE WEATHER...MCLANE

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AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
355 AM PDT FRI SEP 26 2014

#### .SYNOPSIS...

COOLING CONDITIONS THROUGH SATURDAY AS A TROUGH MOVES INLAND ACROSS CENTRAL CALIFORNIA. THE MARINE LAYER WILL DEEPEN TONIGHT WHEN LOW CLOUDS WILL SPREAD ACROSS THE INLAND VALLEYS...ALONG WITH PATCHY DRIZZLE WEST OF THE MOUNTAINS SATURDAY MORNING. THIS TROUGH WILL ALSO BRING GUSTY SOUTHWEST TO WEST WINDS OVER THE MOUNTAINS AND DESERTS THIS AFTERNOON THROUGH SATURDAY NIGHT. THE WEATHER WILL TURN WARMER EARLY NEXT WEEK...AS TEMPERATURES RISE TO NEAR NORMAL ONCE AGAIN.

&&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

A DEEP UPPER TROUGH IS APPROACHING THE NORTHERN CALIFORNIA COAST EARLY THIS FRIDAY MORNING. THIS FEATURE WILL SWING INTO CALIFORNIA LATER TODAY AND BECOME NEGATIVELY TILTED WHILE A CLOSED LOW DEVELOPS THIS AFTERNOON NEAR THE SAN FRANCISCO BAY. A COLD FRONT OUT AHEAD OF THIS SYSTEM HAS HELPED TO GENERATE SOME LIGHT SHOWERS ACROSS MUCH OF CENTRAL CALIFORNIA OVERNIGHT AND EARLIER DURING THE DAY THURSDAY...HOWEVER THE FRONT IS LOSING ITS STEAM SO TO SPEAK. OUR ONLY CHANCES FOR PRECIP WILL OCCUR LATE THIS AFTERNOON AND EVENING WHEN DIURNALLY DRIVEN INSTABILITY COULD HELP TO KICK OFF A FEW SHOWERS AND A T-STORM OVER THE MOUNTAINS AND DESERTS...AS ALREADY MENTIONED IN THE FORECAST...JUST A SLIGHT CHANCE.

THE UPPER LEVEL TROUGH MOVES INTO SOUTHERN CALIFORNIA TONIGHT AND SATURDAY MORNING BUT WITHOUT MUCH IN THE WAY OF MOISTURE WILL HAVE A DIFFICULT TIME SQUEEZING OUT ANY "REAL" PRECIPITATION. WITH VERY STRONG ONSHORE FLOW AND A DEEP MARINE LAYER...THERE WILL BE A GOOD CHANCE FOR DRIZZLE ACROSS THE COASTAL STRETCH AND ALL THE WAY TO THE WESTERN SLOPES OF THE INTERIOR MOUNTAINS...WHERE THERE COULD EVEN BE A FEW HUNDREDTHS OF MEASURABLE DRIZZLE REPORTED LATE TONIGHT OR SATURDAY MORNING.

WITH THE MENTIONED STRONG ONSHORE FLOW COUPLED WITH STRONG PRESSURE GRADIENTS BETWEEN THE COAST AND THE UPPER DESERTS...THERE WILL BE SOME STRONG WIND GUSTS. THE BEST TIMING FOR THE STRONGEST WINDS LOOKS TO OCCUR SATURDAY MORNING THROUGH SATURDAY AFTERNOON ACROSS THE MOUNTAINS AND DESERTS. GUSTS IN THE HIGH DESERTS WILL REACH AROUND 45 MPH WITH GUSTS REACHING 55 MPH IN THE MORE FAVORABLY ORIENTED RIVERSIDE-SAN DIEGO MOUNTAINS AND DESERTS. THE WIND ADVISORY REMAINS IN EFFECT FOR WHERE THOSE

September 27, 2014, Exceptional Event, Imperial County HIGHER WIND GUSTS ARE EXPECTED TO OCCUR. THERE COULD ALSO BE SOME BLOWING DUST IN THE DESERTS. SUNDAY WILL BE ANOTHER "BLUSTERY" DAY ACROSS SOUTHERN CALIFORNIA WITH BREEZY WINDS AND COOLER THAN NORMAL TEMPERATURES AS WE WILL STILL BE UNDER THE INFLUENCE OF THE DEPARTING UPPER LEVEL TROUGH.

BEGINNING MONDAY AND THEN CONTINUING THROUGH MUCH OF THE WEEK...WE WILL BE UNDER THE INFLUENCE OF GRADUALLY INCREASING UPPER LEVEL HEIGHTS...BRINGING A REBOUND IN THE TEMPERATURES TO NEAR NORMAL LEVELS THROUGHOUT MUCH OF THE WEEK. WITH DECREASING ONSHORE GRADIENTS EXPECT A GRADUAL WEAKENING OF THE MARINE INFLUENCE...EVENTUALLY PULLING BACK TO THE IMMEDIATE COASTAL STRETCH. LATER IN THE WEEK...WE ARE STILL SEEING THE POTENTIAL FOR

OFFSHORE WIND FLOW TO DEVELOP...WITH TEMPERATURES POSSIBLY RISING TO ABOVE NORMAL LEVELS WEDNESDAY THROUGH FRIDAY AND LOWER RELATIVE HUMIDITY LEVELS. SOMETHING TO KEEP AN EYE ON ALTHOUGH FOR THE TIME BEING IT DOESN'T LOOK LIKE A PARTICULARLY STRONG EVENT.

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#### .AVIATION...

260940Z...COAST/VALLEYS...PATCHY STRATUS WITH BASES 800-1000 FT WILL CONTINUE TO DEVELOP ALONG THE COAST AND UP TO 10 MI INLAND THROUGH SUNRISE...CLEARING BY 16Z. MORE WIDESPREAD STRATUS WILL FORM ALONG THE COAST LATE THIS AFTERNOON...MOVING INTO THE COASTAL AIRPORTS AFTER 27/03Z AND MOVING INTO THE INLAND VALLEYS OVERNIGHT. BASES WILL BE AROUND 1500-2000 FT MSL...LIFTING TO 2000-2500 FT OVERNIGHT. LOCAL VIS 4 SM OR LESS WHERE STRATUS NEARS HIGHER TERRAIN IN THE INLAND VALLEYS TONIGHT.

MOUNTAINS/DESERTS...CUMULUS/TOWERING CUMULUS WILL DEVELOP THIS AFTERNOON WITH BASES AROUND 9000 FT MSL. THERE IS A SLIGHT CHANCE OF A THUNDERSTORM IN THE DESERTS OF SAN DIEGO COUNTY.

OTHERWISE...MOSTLY CLEAR SKIES WITH UNRESTRICTED VIS WILL CONTINUE THROUGH SAT MORNING.

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#### .MARINE...

250 AM...NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT LIKELY OVER THE OUTER COASTAL WATERS THIS AFTERNOON AND EVENING...STRONGEST NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY FOR WINDS IS IN EFFECT THIS AFTERNOON THROUGH LATE EVENING FOR THE OUTER WATERS. NO HAZARDOUS MARINE WEATHER IS EXPECTED FOR SATURDAY THROUGH TUESDAY.

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#### .SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

#### September 27, 2014, Exceptional Event, Imperial County

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY FROM 1 PM THIS AFTERNOON TO 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY...RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN DIEGO COUNTY MOUNTAINS.

PZ...SMALL CRAFT ADVISORY FOR WINDS FROM 1 PM THIS AFTERNOON TO 2 AM PDT SATURDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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PUBLIC...BROTHERTON AVIATION/MARINE...SS

## IOWA STATE UNIVERSITY

College of Ag
Department of Agronomy

#### **Department of Agronomy**

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FXUS65 KPSR 261145

**AFDPSR** 

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
445 AM MST FRI SEP 26 2014

#### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE INTO THE WESTERN STATES LATE TODAY INTO THE WEEKEND...WHICH WILL RESULT IN AN INCREASED CHANCE OF SHOWERS AND THUNDERSTORMS. SOME OF THE STRONGER STORMS IN SOUTH CENTRAL ARIZONA WILL BE CAPABLE OF PRODUCING LOCALLY GUSTY WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST FROM LATE SUNDAY NIGHT THROUGH THE MIDDLE OF NEXT WEEK.

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#### .DISCUSSION...

NOTE...FORECAST CONFIDENCE CONTINUES TO INCREASE WITH REGARDS TO A GOOD CHANCE OF SHOWERS/THUNDERSTORMS OVER SOUTH CENTRAL AZ... INCLUDING PHOENIX SATURDAY MORNING AND AFTERNOON WITH POSSIBLE HEAVY RAIN.

#### TODAY AND SATURDAY...

MOSTLY CLEAR SKIES WERE NOTED ACROSS THE ENTIRE FORECAST...SOUTHEAST CA TO SOUTH CENTRAL AZ EARLY THIS MORNING. OTHERWISE THE LARGE PACIFIC TROF CONTINUES ON TRACK TOWARD AZ FOR SATURDAY. THE FAVORED GFS MODEL CONTINUES TO BE REMARKABLY CONSISTENT WITH ITS IMPACT OVER OUR FORECAST AREA MAINLY LATE NIGHT...BUT PARTICULARLY SATURDAY.

THEREFORE THERE IS NOT MUCH CHANGE IN FORECAST THINKING FROM YESTERDAY. INCREASING CLOUDS ARE EXPECTED ACROSS THE FORECAST AREA TODAY...WITH A SLIGHT CHANCE OF PRECIP LATE IN THE DAY OVER SOUTHEAST CA/SOUTHWEST AZ...AND OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY ZONE 24.

AS THE PACIFIC LOW APPROACHES LATER TODAY...UPPER LEVEL DYNAMICS INCREASE ALONG THE COLORADO RIVER...WITH DYNAMICS SLOWLY SHIFTING TOWARD PHOENIX LATE NIGHT. THEREFORE PRECIP PROBABILITIES ACROSS THE FORECAST AREA WILL BE MUCH HIGHER OVER LA PAZ COUNTY IN SOUTHWEST AZ TONIGHT.

DEVELOPING STORM DYNAMICS UNDER INCREASING MONSOON MOISTURE WILL BE STRONGEST OVER SOUTH CENTRAL AZ...INCLUDING PHOENIX SATURDAY MORNING AND EARLY AFTERNOON. THERE CONTINUES TO BE POTENTIAL FOR HEAVY RAIN WITH CONVECTIVE STORMS. IN FACT THE STORM PREDICTION CENTER HAS ISSUED A SLIGHT RISK FOR SEVERE THUNDERSTORMS IN NORTHERN AND CENTRAL AZ...INCLUDING PHOENIX SATURDAY AFTERNOON. BELOW IS AN EXCERPT FROM THEM ISSUED THURSDAY EVENING AT 1131 PM CDT.

WITH 50KT+ 500MB SPEED MAX FORECAST TO OVERSPREAD THE COLD

September 27, 2014, Exceptional Event, Imperial County FRONT...SFC-6KM BULK SHEAR VALUES ARE SEASONALLY STRONG AND SHOULD SUPPORT ORGANIZED POTENTIALLY ROTATING STORMS.
ENVIRONMENTAL CONDITIONS APPEAR FAVORABLE FOR ISOLATED SUPERCELLS...ESPECIALLY IF BUOYANCY IS AT OR GREATER THAN CURRENTLY FORECAST. LARGE HAIL...LOCALLY DAMAGING WINDS AND PERHAPS AN ISOLATED TORNADO ARE POSSIBLE WITH STRONGEST CONVECTION.

THEREFORE OUR FORECAST CONFIDENCE FOR POTENTIAL WIDESPREAD SHOWERS AND THUNDERSTORMS SATURDAY OVER PARTS OF SOUTHWEST AND MOSTLY SOUTH CENTRAL AZ IS HIGH. HOWEVER BECAUSE OF THE NATURE OF FAST MOVING HIT AND MISS THUNDERSTORMS...THE PREDICTION OF RAINFALL AMOUNTS IS NOT AS CLEAR WITH REGARDS TO FLOOD OR FLASH FLOODING.

SHOWER POTENTIAL WILL MOVE INTO EASTERN AZ SATURDAY EVENING WITH THE THE COLD FRONT...I.E. OVER SOUTHERN GILA COUNTY ZONE 24. CLEARING SKIES ARE EXPECTED OVER SOUTHWEST AND SOUTH CENTRAL AZ LATE SATURDAY EVENING AND NIGHT.

#### SUNDAY...

A MUCH DRIER AIRMASS FOLLOWING THE COLD FRONT WILL SPREAD ACROSS SOUTHEAST CA...SOUTHWEST AND SOUTH CENTRAL AZ SUNDAY. HOWEVER... DEEP MOISTURE WILL CONTINUE TO REMAIN ALONG THE EASTERN AZ BORDER UNTIL SUNDAY NIGHT. A THREAT OF SHOWERS AND THUNDERSTORMS WILL LINGER OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY ON SUNDAY.

#### MONDAY THROUGH WEDNESDAY...

DRY WEATHER WITH NEAR SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

#### &&

#### .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...

INCREASED MOISTURE WILL LEAD TO EARLY TO MID AFTERNOON SHOWERS AND THUNDERSTORMS OVER FAVORED HIGH TERRAIN AREAS. SOME OF THESE STORMS SHOULD MAKE THEIR WAY INTO THE PHOENIX AREA EARLY THIS EVENING...POSSIBLY AFFECTING AREA TERMINALS. A REMOTE THREAT FOR SHOWERS WILL REMAIN THROUGH THE OVERNIGHT HOURS FRIDAY NIGHT AHEAD OF AN APPROACHING COLD FRONT. WINDS WILL REMAIN LIGHT THROUGH THE PERIOD WITH ONLY A SMALL WINDOW OF WESTERLY DIRECTIONAL FLOW MAINLY LATE THIS AFTERNOON.

SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

WINDS WILL INCREASE THROUGH THE DAY TODAY WITH GUSTY WINDS EXPECTED THIS AFTERNOON. CHANCES FOR SHOWERS AND THUNDERSTORMS WILL INCREASE AS THE DAY PROGRESSES WITH THE BEST CHANCE GENERALLY BETWEEN 21Z-03Z TODAY...AND FAVORING THE LOWER COLORADO RIVER VALLEY. SOME THUNDERSTORMS TODAY MAY BE STRONG...POTENTIALLY PRODUCING STRONG OUTFLOW WINDS. A SMALL CHANCE OF MAINLY SHOWERS WILL REMAIN THROUGH THE OVERNIGHT HOURS TONIGHT AHEAD OF AN APPROACHING COLD FRONT THAT

September 27, 2014, Exceptional Event, Imperial County IS EXPECTED TO SWEEP THROUGH THE AREA SOME TIME SATURDAY MORNING.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

SUNDAY THROUGH THURSDAY...

SHOWERS AND THUNDERSTORMS...MAINLY EAST OF PHOENIX...ARE POSSIBLE ON SUNDAY AS AN UPPER LEVEL TROUGH LINGERS OVER THE REGION. DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD.

AFTERNOON MINIMUM HUMIDITY LEVELS WILL AVERAGE AROUND 20 PERCENT ON

SUNDAY...AND THEN TREND TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH ON SUNDAY...THOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...VASQUEZ AVIATION...KUHLMAN FIRE WEATHER...MCLANE



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WWUS76 KSGX 261151

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 451 AM PDT FRI SEP 26 2014

...STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH SATURDAY NIGHT...

CAZ056-058-061-062-262100-

/O.CON.KSGX.WI.Y.0047.140926T2000Z-140928T1100Z/
RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINSCOACHELLA VALLEY-SAN DIEGO COUNTY DESERTS451 AM PDT FRI SEP 26 2014

- ...WIND ADVISORY REMAINS IN EFFECT FROM 1 PM THIS AFTERNOON TO
- 4 AM PDT SUNDAY...
- \* WINDS...WEST TO SOUTHWEST 25 TO 35 MPH WITH GUSTS UP TO 55 MPH.
- \* TIMING...STRONGEST WINDS SATURDAY AFTERNOON AND EVENING.
- \* LOCATIONS...ALONG MOUNTAIN RIDGES...DESERT SLOPES...THROUGH AND BELOW CANYONS AND PASSES...AND ADJACENT DESERTS. IN THE COACHELLA VALLEY...THROUGH AND BELOW THE SAN GORGONIO PASS AND NORTH OF INTERSTATE 10. INTERSTATE 8 IN THE SAN DIEGO COUNTY MOUNTAINS AND DESERT WILL BE IMPACTED AS WELL.
- \* VISIBILITY...MAY BE REDUCED IN THE DESERT DUE TO BLOWING DUST.
- \* IMPACTS...THE WINDS MAY MAKE FOR DIFFICULT DRIVING CONDITIONS...ESPECIALLY FOR HIGH PROFILE VEHICLES. WATCH OUT FOR BROKEN TREE LIMBS. BLOWING DUST IN THE DESERT COULD MAKE IT DIFFICULT TRAVEL. PLAN FOR POSSIBLE DELAYS.
- \* OUTLOOK...WINDS WILL DIMINISH BY SUNDAY MORNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A WIND ADVISORY MEANS THAT WINDS OF 35 MPH OR GUSTS OF 45 MPH OR GREATER ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

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JMB

#### September 27, 2014, Exceptional Event, Imperial County

419 FXUS66 KSGX 261545 AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
845 AM PDT FRI SEP 26 2014

#### .SYNOPSIS...

COOLING WILL CONTINUE THROUGH SATURDAY AS A TROUGH MOVES INLAND ACROSS CENTRAL CALIFORNIA. SOME MOISTURE AND INSTABILITY COULD BRING AN ISOLATED THUNDERSTORM OR SHOWER TO THE LOWER DESERTS AND POSSIBLY THE HIGHEST MOUNTAIN PEAKS THIS AFTERNOON THROUGH EARLY THIS EVENING. THE TROUGH WILL DEEPEN THE MARINE LAYER TONIGHT...WITH LOW CLOUDS MAKING IT TO THE COASTAL SLOPES...ALONG WITH POSSIBLY SOME PATCHY DRIZZLE WEST OF THE MOUNTAINS. ONSHORE FLOW WILL STRENGTHEN SIGNIFICANTLY...WITH STRONG AND GUSTY SOUTHWEST TO WEST WINDS OVER THE MOUNTAINS AND DESERTS THIS AFTERNOON THROUGH EARLY SUNDAY MORNING. THE WEATHER WILL TURN WARMER SUNDAY THROUGH MOST OF NEXT WEEK...AS HIGH PRESSURE ALOFT SLOWLY BUILDS OVER THE REGION. NIGHT AND MORNING STRATUS IS LIKELY TO BE PATCHY AND MAINLY OCCUR OVER THE COASTAL AND WESTERN VALLEY SECTIONS.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

MORNING VISIBLE SATELLITE DEPICTS PATCHY STRATUS OVER THE NEARSHORE WATERS AND COASTAL AREAS OF SAN DIEGO COUNTY...AND ALSO SOME SCATTERED-TO-BROKEN CLOUDS OVER THE COACHELLA VALLEY AND SAN BERNARDINO MOUNTAINS. THE 12Z MIRAMAR SOUNDING SHOWS A STABLE SOUNDING...WITH A WEAK MARINE LAYER INVERSION AT AROUND 1000 FEET...SOUTHWEST FLOW THROUGHOUT THE PROFILE...AND A BIT HIGHER PRECIPITABLE WATER OF 1.43 INCHES. GPS MET PRECIPITABLE WATER SENSORS INDICATE THAT THE LOWER DESERTS HAVE VALUES IN THE 1.4 TO 1.6 INCH RANGE. CURRENT SPC MESOANALYSIS SHOWS MOST UNSTABLE CAPES OF 500-1000 J/KG IN THE LOWER DESERTS...AND WITH THE STRONGER ONSHORE FLOW...THE LOCAL WRF HAS A POTENTIAL SURFACE CONVERGENCE BOUNDARY SETTING UP IN THE DESERTS THIS AFTERNOON BEFORE MOVING EAST OF THE AREA LATE IN THE AFTERNOON. WITH THE MOISTURE IN PLACE AND SOME INSTABILITY...THERE COULD BE JUST ENOUGH LIFT TO CREATE AN ISOLATED THUNDERSTORM/SHOWER OR TWO IN THE LOWER DESERTS THIS AFTERNOON THROUGH EARLY EVENING...AND POSSIBLY OVER SOME THE HIGHEST MOUNTAIN PEAKS AS WELL. MEANWHILE...THE MARINE LAYER STRATUS THIS MORNING SHOULD HAVE NO TROUBLE CLEARING OUT BY LATE THIS MORNING DUE TO THE WEAK INVERSION.

CURRENT WATER VAPOR SATELLITE SHOWS A DEEPENING TROUGH OFF THE COAST OF NORTHERN CALIFORNIA AND MOVING TO THE SOUTHEAST. THE TROUGH WILL EVENTUALLY DEVELOP INTO A CLOSED LOW TONIGHT AS IT MOVES INLAND OVER CENTRAL CALIFORNIA. THIS WILL RESULT IN CONTINUED STRENGTHENING OF

September 27, 2014, Exceptional Event, Imperial County
THE ONSHORE PRESSURE GRADIENTS...WITH STRONG AND GUSTY SOUTHWEST TO
WEST WINDS LIKELY OCCURRING OVER MOUNTAIN RIDGES...THROUGH
PASSES/CANYONS...ALONG DESERT SLOPES AND INTO ADJACENT DESERT AREAS
THIS AFTERNOON THROUGH EARLY SUNDAY MORNING. NAM12 CONTINUES TO
INDICATE ONSHORE PRESSURE GRADIENTS PEAKING AT AROUND 7 MB FROM SAN
DIEGO TO DAGGETT...ALTHOUGH THEY MAY GET STRONGER THAN THAT. THE
CANSAC\_WRF ALSO DEPICTS STRONG SUSTAINED WINDS OF 30-40 MPH
OCCURRING IN THESE AREAS. A WIND ADVISORY GOES INTO EFFECT FOR THE
RIVERSIDE AND SAN DIEGO COUNTY MOUNTAINS AND DESERTS THIS
AFTERNOON...AS GUSTS OF 45-55 MPH WILL BE POSSIBLE. ALTHOUGH WINDS
WILL BE GUSTY IN THE SAN BERNARDINO COUNTY MOUNTAINS AND
DESERTS...THEY DO NOT APPEAR TO GET QUITE STRONG ENOUGH TO WARRANT A
WIND ADVISORY AT THIS TIME. THE STRONGER AND COOLER ONSHORE

FLOW...IN ADDITION TO THE COLDER AIR MASS STARTING TO MOVE IN...WILL BRING SIGNIFICANTLY COOLER CONDITIONS TODAY...AND THEN INTO SATURDAY AS WELL...WITH DAY-TIME HIGHS FALLING TO 10 TO 20 DEGREES BELOW NORMAL ON SATURDAY.

WITH THE TROUGH MOVING INLAND...THE MARINE LAYER WILL DEEPEN AS WELL...LIKELY UP TO 4000 FEET DEEP TONIGHT...RESULTING IN STRATUS MOVING INTO THE FAR INLAND VALLEYS AND AGAINST THE COASTAL SLOPES. THE LIFT PROVIDED BY THE TROUGH AND THE MOISTURE FROM THE MARINE LAYER MAY BRING SOME PATCHY DRIZZLE WEST OF THE MOUNTAINS TONIGHT/TOMORROW MORNING. THE MARINE LAYER WILL REMAIN DEEP SATURDAY NIGHT INTO SUNDAY MORNING AS WELL. THERE DOES APPEAR TO BE SOME ENHANCED 850-500 MB MOISTURE WHICH MOVES INTO THE HIGH DESERTS AND SAN BERNARDINO COUNTY MOUNTAINS EARLY SUNDAY INTO EARLY MONDAY. THIS...IN ADDITION TO A VORTICITY MAX...COULD BRING SOME ISOLATED SHOWERS TO THOSE AREAS DURING THAT TIME. THE FORECAST REMAINS DRY FOR NOW...BUT WILL TAKE A LOOK AT THINGS FURTHER LATER TODAY TO SEE IF SHOWERS NEED TO BE ADDED.

SUNDAY THROUGH WEDNESDAY...THE TROUGH WILL MOVE TO THE NORTHEAST WITH HIGHER PRESSURE MOVING IN ALOFT AND NORTHWEST FLOW ALOFT. THIS WILL RESULT IN INCREASINGLY WARMER DAYS AS DAY-TIME HIGHS REACH NEAR TO SLIGHTLY ABOVE NORMAL BY WEDNESDAY. THE MARINE LAYER WILL BECOME SHALLOWER AS WELL...WITH PATCHY NIGHT AND MORNING STRATUS MAINLY OVER THE COASTAL AND WESTERN VALLEY SECTIONS. MODELS ARE IN DECENT AGREEMENT WITH A RIDGE MOVING OVER THE REGION THURSDAY INTO FRIDAY...WITH POSSIBLY SOME WEAK OFFSHORE FLOW. IF THIS WERE TO OCCUR...WARMING WOULD CONTINUE...AND THE MARINE LAYER COULD BE ERADICATED ALTOGETHER.

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.AVIATION...

261530Z...MOSTLY CLEAR AND VFR CONDITIONS WILL PREVAIL TODAY NEAR THE COAST. LOW CLOUDS AT AROUND 2500 FEET MSL IN THE KTRM AREA WILL CLEAR BY 18Z. BUILDING CLOUDS OVER MOUNTAINS AND DESERTS BETWEEN 20-01Z THIS AFTERNOON WITH BASES AROUND 9000 FEET MSL COULD LEAD TO AN ISOLATED THUNDERSTORM. LOW CLOUDS WILL FORM ALONG THE COAST LATE THIS AFTERNOON...MOVING INTO THE COASTAL AIRPORTS 01-05Z AND INTO THE INLAND VALLEYS AFTER 06Z. BASES WILL BE AROUND 1500-2000 FEET MSL...LIFTING TO 2000-2500 FEET OVERNIGHT. LOCAL VIS 4SM OR LESS

September 27, 2014, Exceptional Event, Imperial County WHERE CLOUDS HIT HIGHER TERRAIN INLAND. CLEARING SATURDAY EXPECTED BY 18Z.

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.MARINE...

830 AM...NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT LIKELY OVER THE OUTER COASTAL WATERS THIS AFTERNOON AND EVENING...STRONGEST NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THIS AFTERNOON THROUGH LATE EVENING FOR THE OUTER WATERS. NO HAZARDOUS MARINE WEATHER IS EXPECTED FOR SATURDAY THROUGH TUESDAY.

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.SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY FROM 1 PM THIS AFTERNOON TO 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY...RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN DIEGO COUNTY MOUNTAINS.

PZ...SMALL CRAFT ADVISORY FOR WINDS FROM 1 PM THIS AFTERNOON TO 2 AM PDT SATURDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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PUBLIC...HARRISON AVIATION/MARINE...MM



College of Ag

Department of Agronomy

788 FXUS65 KPSR 261559 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
900 AM MST FRI SEP 26 2014

# .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE INTO THE WESTERN STATES LATE TODAY INTO THE WEEKEND...WHICH WILL RESULT IN AN INCREASED CHANCE OF SHOWERS AND THUNDERSTORMS. SOME OF THE STRONGER STORMS IN SOUTH CENTRAL ARIZONA WILL BE CAPABLE OF PRODUCING LOCALLY GUSTY WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST FROM LATE SUNDAY NIGHT THROUGH THE MIDDLE OF NEXT WEEK.

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### .DISCUSSION...

MOISTURE MOVING NORTH FROM MEXICO HAS BROUGHT A WARM...AND VERY MUGGY MORNING TO OUR CWA TODAY...WITH SFC DEWPOINTS IN THE MID-UPPER 70S ACROSS SE CA AND SW AZ...AND DEWPOINTS IN THE UPPER 60S AND LOW 70S ACROSS SOUTH-CENTRAL AZ. THE LATEST GOES SOUNDER IMAGERY IS NOW SHOWING PWATS HAVE RISEN IN THE 1.40-1.70 INCH RANGE ACROSS OUR CWA AS WELL. THE UPPER LOW THAT WILL BE ACTING ON THIS COPIOUS MOISTURE IS JUST ABOUT READY TO MOVE INLAND OVER THE SFO BAY AREA. AS FAR AS THE VERY SHORT-TERM FORECAST IS CONCERNED...AFTER A QUIET MORNING...THE LATEST HRRR IS SHOWING THE DEVELOPMENT OF ISOLATED-SCATTERED SHOWERS AND THUNDERSTORMS ACROSS THE TUCSON CWA...GILA COUNTY...AND EVEN ACROSS SE CA AS THE UPPER LOW BEGINS TO APPROACH THAT REGION...WHICH FITS WELL WITH OUR CURRENT GRIDDED AND ZONE FORECASTS. OTHER THAN SOME MINOR ADJUSTMENTS TO THE HOURLY TEMPERATURE AND DEWPOINT GRIDS...NO UPDATES ARE PLANNED.

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# .PREVIOUS DISCUSSION...

NOTE...FORECAST CONFIDENCE CONTINUES TO INCREASE WITH REGARDS TO A GOOD CHANCE OF SHOWERS/THUNDERSTORMS OVER SOUTH CENTRAL AZ... INCLUDING PHOENIX SATURDAY MORNING AND AFTERNOON WITH POSSIBLE HEAVY RAIN.

# TODAY AND SATURDAY...

MOSTLY CLEAR SKIES WERE NOTED ACROSS THE ENTIRE FORECAST...SOUTHEAST CA TO SOUTH CENTRAL AZ EARLY THIS MORNING. OTHERWISE THE LARGE PACIFIC TROF CONTINUES ON TRACK TOWARD AZ FOR SATURDAY. THE FAVORED GFS MODEL CONTINUES TO BE REMARKABLY CONSISTENT WITH ITS IMPACT OVER OUR FORECAST AREA MAINLY LATE NIGHT...BUT PARTICULARLY SATURDAY.

THEREFORE THERE IS NOT MUCH CHANGE IN FORECAST THINKING FROM YESTERDAY. INCREASING CLOUDS ARE EXPECTED ACROSS THE FORECAST AREA TODAY...WITH A SLIGHT CHANCE OF PRECIP LATE IN THE DAY OVER

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DEVELOPING STORM DYNAMICS UNDER INCREASING MONSOON MOISTURE WILL BE STRONGEST OVER SOUTH CENTRAL AZ...INCLUDING PHOENIX SATURDAY MORNING AND EARLY AFTERNOON. THERE CONTINUES TO BE POTENTIAL FOR HEAVY RAIN WITH CONVECTIVE STORMS. IN FACT THE STORM PREDICTION CENTER HAS

ISSUED A SLIGHT RISK FOR SEVERE THUNDERSTORMS IN NORTHERN AND CENTRAL AZ...INCLUDING PHOENIX SATURDAY AFTERNOON. BELOW IS AN EXCERPT FROM THEM ISSUED THURSDAY EVENING AT 1131 PM CDT.

WITH 50KT+ 500MB SPEED MAX FORECAST TO OVERSPREAD THE COLD FRONT...SFC-6KM BULK SHEAR VALUES ARE SEASONALLY STRONG AND SHOULD SUPPORT ORGANIZED POTENTIALLY ROTATING STORMS. ENVIRONMENTAL CONDITIONS APPEAR FAVORABLE FOR ISOLATED SUPERCELLS...ESPECIALLY IF BUOYANCY IS AT OR GREATER THAN CURRENTLY FORECAST. LARGE HAIL...LOCALLY DAMAGING WINDS AND PERHAPS AN ISOLATED TORNADO ARE POSSIBLE WITH STRONGEST CONVECTION.

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SHOWER POTENTIAL WILL MOVE INTO EASTERN AZ SATURDAY EVENING WITH THE THE COLD FRONT...I.E. OVER SOUTHERN GILA COUNTY ZONE 24. CLEARING SKIES ARE EXPECTED OVER SOUTHWEST AND SOUTH CENTRAL AZ LATE SATURDAY EVENING AND NIGHT.

## SUNDAY...

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MONDAY THROUGH WEDNESDAY...

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&&

.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...

INCREASED MOISTURE WILL LEAD TO EARLY TO MID AFTERNOON SHOWERS AND

September 27, 2014, Exceptional Event, Imperial County THUNDERSTORMS OVER FAVORED HIGH TERRAIN AREAS. SOME OF THESE STORMS SHOULD MAKE THEIR WAY INTO THE PHOENIX AREA EARLY THIS EVENING...POSSIBLY AFFECTING AREA TERMINALS. A REMOTE THREAT FOR SHOWERS WILL REMAIN THROUGH THE OVERNIGHT HOURS FRIDAY NIGHT AHEAD OF AN APPROACHING COLD FRONT. WINDS WILL REMAIN LIGHT THROUGH THE PERIOD WITH ONLY A SMALL WINDOW OF WESTERLY DIRECTIONAL FLOW MAINLY LATE THIS AFTERNOON.

SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

WINDS WILL INCREASE THROUGH THE DAY TODAY WITH GUSTY WINDS EXPECTED THIS AFTERNOON. CHANCES FOR SHOWERS AND THUNDERSTORMS WILL INCREASE

AS THE DAY PROGRESSES WITH THE BEST CHANCE GENERALLY BETWEEN 21Z-03Z TODAY...AND FAVORING THE LOWER COLORADO RIVER VALLEY. SOME THUNDERSTORMS TODAY MAY BE STRONG...POTENTIALLY PRODUCING STRONG OUTFLOW WINDS. A SMALL CHANCE OF MAINLY SHOWERS WILL REMAIN THROUGH THE OVERNIGHT HOURS TONIGHT AHEAD OF AN APPROACHING COLD FRONT THAT IS EXPECTED TO SWEEP THROUGH THE AREA SOME TIME SATURDAY MORNING.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

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.FIRE WEATHER...

SUNDAY THROUGH THURSDAY...

SHOWERS AND THUNDERSTORMS...MAINLY EAST OF PHOENIX...ARE POSSIBLE ON SUNDAY AS AN UPPER LEVEL TROUGH LINGERS OVER THE REGION. DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. AFTERNOON MINIMUM HUMIDITY LEVELS WILL AVERAGE AROUND 20 PERCENT ON SUNDAY...AND THEN TREND TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH ON SUNDAY...THOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...PERCHA/VASQUEZ

AVIATION...KUHLMAN

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AEUS75 KPSR 261904

**AQAPSR** 

AZC027-280430-

AIR QUALITY ALERT
NATIONAL WEATHER SERVICE PHOENIX AZ
1204 PM MST FRI SEP 26 2014

...HIGH POLLUTION ADVISORY FOR YUMA COUNTY SATURDAY...

AN AIRBORNE COARSE PARTICLE HIGH POLLUTION ADVISORY HAS BEEN ISSUED FOR YUMA COUNTY FOR SATURDAY.

AN EPISODE OF STRONG AND GUSTY WINDS IS FORECAST TO GENERATE WIDESPREAD BLOWING DUST THAT MAY RESULT IN LOCAL COARSE PARTICLE CONCENTRATIONS THAT POSE A HEALTH RISK. ADVERSE HEALTH EFFECTS INCREASE AS AIR QUALITY DETERIORATES.

COARSE PARTICULATE MATTER - ALSO KNOWN AS PM-10 - IS AN AIR CONTAMINANT THAT CAN AGGRAVATE HEART AND LUNG DISEASE CONDITIONS... ESPECIALLY IN OLDER ADULTS...CHILDREN...AND THOSE WITH ASTHMA. A DECREASE IN PHYSICAL ACTIVITY IS RECOMMENDED.

CONSOLIDATE YOUR TRAVEL...STABILIZE LOOSE SOILS...SLOW DOWN OR AVOID TRAVEL ON DIRT ROADS...REDUCE OR ELIMINATE FIREPLACE USE...AND AVOID USING GAS-POWERED LAWN EQUIPMENT.

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College of Ag
Department of Agronomy

# **Department of Agronomy**

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9/14/2018

WWUS76 KSGX 262015

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 115 PM PDT FRI SEP 26 2014

...STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH EARLY SUNDAY MORNING...

.A TROUGH OF LOW PRESSURE MOVING INLAND OVER CENTRAL CALIFORNIA WILL BRING STRONG ONSHORE FLOW TO SOUTHERN CALIFORNIA...RESULTING IN STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH EARLY SUNDAY. WINDS WILL PEAK DURING THE EVENING THROUGH EARLY MORNING HOURS.

CAZ056-058-061-062-270500-

/O.CON.KSGX.WI.Y.0047.000000T0000Z-140928T1100Z/ RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINS-COACHELLA VALLEY-SAN DIEGO COUNTY DESERTS-115 PM PDT FRI SEP 26 2014

- ...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 AM PDT SUNDAY...
- \* WINDS...WEST TO SOUTHWEST 25 TO 35 MPH WITH GUSTS UP TO 55 MPH.
- \* TIMING...THROUGH EARLY SUNDAY MORNING.
- \* LOCATIONS...ALONG MOUNTAIN RIDGES...DESERT SLOPES...THROUGH AND BELOW CANYONS AND PASSES...AND INTO ADJACENT DESERT AREAS. IN THE COACHELLA VALLEY...THROUGH AND BELOW THE SAN GORGONIO PASS AND NORTH OF INTERSTATE 10. INTERSTATE 8 IN THE SAN DIEGO COUNTY MOUNTAINS AND DESERT WILL BE IMPACTED AS WELL.
- \* VISIBILITY...MAY BE REDUCED IN THE DESERT DUE TO BLOWING DUST.
- \* IMPACTS...THE WINDS MAY MAKE FOR DIFFICULT DRIVING CONDITIONS...ESPECIALLY FOR HIGH PROFILE VEHICLES. WATCH OUT FOR BROKEN TREE LIMBS. BLOWING DUST IN THE DESERT COULD MAKE IT DIFFICULT TO TRAVEL.
- \* OUTLOOK...WINDS WILL DIMINISH BY LATE SUNDAY MORNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A WIND ADVISORY MEANS THAT WINDS OF 35 MPH OR GUSTS OF 45 MPH OR GREATER ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

Appendix A

018 FXUS66 KSGX 262039 AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
139 PM PDT FRI SEP 26 2014

# .SYNOPSIS...

COOLING WILL CONTINUE THROUGH SATURDAY AS A TROUGH MOVES INLAND ACROSS CENTRAL CALIFORNIA. SOME MOISTURE AND INSTABILITY COULD BRING AN ISOLATED THUNDERSTORM OR SHOWER TO THE LOWER DESERTS AND POSSIBLY THE HIGHEST MOUNTAIN PEAKS THIS AFTERNOON THROUGH EARLY THIS EVENING. THE TROUGH WILL DEEPEN THE MARINE LAYER TONIGHT...WITH LOW CLOUDS MAKING IT TO THE COASTAL SLOPES...ALONG WITH POSSIBLY SOME PATCHY DRIZZLE WEST OF THE MOUNTAINS. ONSHORE FLOW WILL STRENGTHEN SIGNIFICANTLY...WITH STRONG AND GUSTY SOUTHWEST TO WEST WINDS OVER THE MOUNTAINS AND DESERTS THIS AFTERNOON THROUGH EARLY SUNDAY MORNING. ALSO...A SHOWER OR TWO MAY OCCUR OVER THE SAN BERNARDINO COUNTY MOUNTAINS LATE SATURDAY THROUGH LATE SUNDAY. THE WEATHER WILL TURN WARMER SUNDAY THROUGH MOST OF NEXT WEEK...AS HIGH PRESSURE ALOFT SLOWLY BUILDS OVER THE REGION. NIGHT AND MORNING STRATUS IS LIKELY TO BE PATCHY AND MAINLY OCCUR OVER THE COASTAL AND WESTERN VALLEY SECTIONS.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

AFTERNOON VISIBLE SATELLITE DEPICTS SCATTERED-TO-BROKEN CUMULUS OVER THE DESERT SLOPES AND DESERTS WITH CLOUD TOPS DRIFTING TO THE NORTHEAST. LOOKING OUT THE WINDOW...THERE ARE ALSO A LOT OF LENTICULAR CLOUDS AROUND THE AREA...WHICH IS IN AN INDICATION OF TURBULENCE AND STRONG WESTERLY FLOW. THE 12Z MIRAMAR SOUNDING SHOWS A STABLE SOUNDING...WITH A WEAK MARINE LAYER INVERSION AT AROUND 1000 FEET...SOUTHWEST FLOW THROUGHOUT THE PROFILE...AND A BIT HIGHER PRECIPITABLE WATER OF 1.43 INCHES. GPS MET PRECIPITABLE WATER SENSORS INDICATE THAT THE LOWER DESERTS HAVE VALUES IN THE 1.4 TO 1.8 INCH RANGE. CURRENT SPC MESOANALYSIS SHOWS MOST UNSTABLE CAPES OF 500-1000 J/KG IN THE LOWER DESERTS...AND WITH THE STRONGER ONSHORE FLOW...THE LOCAL WRF HAS A POTENTIAL SURFACE CONVERGENCE BOUNDARY SETTING UP IN THE DESERTS THIS AFTERNOON BEFORE MOVING EAST OF THE AREA LATE IN THE AFTERNOON. WITH THE MOISTURE IN PLACE AND SOME INSTABILITY...THERE COULD BE JUST ENOUGH LIFT TO CREATE AN ISOLATED THUNDERSTORM/SHOWER OR TWO IN THE LOWER DESERTS THIS AFTERNOON THROUGH EARLY EVENING...AND POSSIBLY OVER SOME THE HIGHEST MOUNTAIN PEAKS AS WELL.

CURRENT WATER VAPOR SATELLITE SHOWS A DEEPENING TROUGH OFF THE COAST OF NORTHERN CALIFORNIA AND MOVING TO THE SOUTHEAST. THE TROUGH WILL EVENTUALLY DEVELOP INTO A CLOSED LOW TONIGHT AS IT MOVES INLAND OVER

September 27, 2014, Exceptional Event, Imperial County
CENTRAL CALIFORNIA. THIS WILL RESULT IN CONTINUED STRENGTHENING OF
THE ONSHORE PRESSURE GRADIENTS...WITH STRONG AND GUSTY SOUTHWEST TO
WEST WINDS LIKELY OCCURRING OVER MOUNTAIN RIDGES...THROUGH
PASSES/CANYONS...ALONG DESERT SLOPES AND INTO ADJACENT DESERT AREAS
THIS AFTERNOON THROUGH EARLY SUNDAY MORNING. NAM12 CONTINUES TO
INDICATE ONSHORE PRESSURE GRADIENTS PEAKING AT AROUND 7 MB FROM SAN
DIEGO TO DAGGETT...ALTHOUGH THEY MAY GET STRONGER THAN THAT. THE
CANSAC\_WRF ALSO DEPICTS STRONG SUSTAINED WINDS OF 30-40 MPH
OCCURRING IN THESE AREAS. A WIND ADVISORY CONTINUES FOR THE
RIVERSIDE AND SAN DIEGO COUNTY MOUNTAINS AND DESERTS THROUGH EARLY
SUNDAY MORNING...AS GUSTS OF 45-55 MPH WILL BE POSSIBLE. ALTHOUGH
WINDS WILL BE GUSTY IN THE SAN BERNARDINO COUNTY MOUNTAINS AND
DESERTS...THEY DO NOT APPEAR TO GET OUITE STRONG ENOUGH TO WARRANT A

WIND ADVISORY AT THIS TIME. THE STRONGER AND COOLER ONSHORE FLOW...IN ADDITION TO THE COLDER AIR MASS STARTING TO MOVE IN...IS BRINGING SIGNIFICANTLY COOLER CONDITIONS TODAY...WITH TEMPERATURES ABOUT 5 TO 12 DEGREES LOWER THAN THEY WERE AT THIS TIME YESTERDAY. COOLING WILL CONTINUE INTO SATURDAY AS WELL...WITH DAY-TIME HIGHS FALLING TO 10 TO 20 DEGREES BELOW NORMAL.

WITH THE TROUGH MOVING INLAND...THE MARINE LAYER WILL DEEPEN AS WELL...LIKELY UP TO 4000 FEET DEEP TONIGHT...RESULTING IN STRATUS MOVING INTO THE FAR INLAND VALLEYS AND AGAINST THE COASTAL SLOPES. THE LIFT PROVIDED BY THE TROUGH AND THE MOISTURE FROM THE MARINE LAYER MAY BRING SOME PATCHY DRIZZLE WEST OF THE MOUNTAINS TONIGHT/TOMORROW MORNING. THE MARINE LAYER WILL REMAIN DEEP SATURDAY NIGHT INTO SUNDAY MORNING AS WELL. THERE DOES APPEAR TO BE SOME ENHANCED 850-500 MB MOISTURE...PARTICULARLY THE 850-700 MB LAYER...WHICH MOVES INTO THE SAN BERNARDINO COUNTY MOUNTAINS LATE SATURDAY INTO LATE SUNDAY. THIS...IN ADDITION TO VORTICITY MAXES ROTATING AROUND THE LOW...COULD BE ENOUGH TO TRIGGER ISOLATED SHOWERS OVER THE SAN BERNARDINO COUNTY MOUNTAINS DURING THAT TIME. THUS...A SLIGHT CHANCE OF SHOWERS WAS ADDED TO THE FORECAST FOR LATE SATURDAY INTO LATE SUNDAY FOR THE SAN BERNARDINO COUNTY MOUNTAINS.

SUNDAY THROUGH WEDNESDAY...THE TROUGH WILL MOVE TO THE NORTHEAST WITH HIGHER PRESSURE MOVING IN ALOFT AND NORTHWEST FLOW ALOFT. THIS WILL RESULT IN INCREASINGLY WARMER DAYS AS DAY-TIME HIGHS REACH NEAR TO SLIGHTLY ABOVE NORMAL BY WEDNESDAY. THE MARINE LAYER WILL BECOME SHALLOWER AS WELL...WITH PATCHY NIGHT AND MORNING STRATUS MAINLY OVER THE COASTAL AND WESTERN VALLEY SECTIONS. MODELS ARE IN DECENT AGREEMENT WITH A RIDGE MOVING OVER THE REGION THURSDAY INTO FRIDAY...WITH SOME WEAK TO POSSIBLY MODERATE OFFSHORE FLOW. IF THIS WERE TO OCCUR...WARMING WOULD CONTINUE...AND THE MARINE LAYER COULD BE ERADICATED ALTOGETHER. GIVEN THE CONSISTENCY AND AGREEMENT THE MODELS SHOW IN THIS SOLUTION...HAVE INCREASED THE MAX AND MIN TEMPERATURES FOR THURSDAY AND FRIDAY.

&&

.AVIATION...

262030Z...MOSTLY CLEAR AND VFR CONDITIONS WILL PREVAIL TODAY NEAR THE COAST. CLOUDS OVER MOUNTAINS AND DESERTS THROUGH 02Z THIS EVENING WITH BASES AROUND 9000 FEET MSL COULD LEAD TO AN ISOLATED

IEM :: AFD from NWS SGX

September 27, 2014, Exceptional Event, Imperial County THUNDERSTORM. LOW CLOUDS WILL FORM ALONG THE COAST LATE THIS AFTERNOON AND MOVE INTO THE COASTAL AIRPORTS 02-07Z AND INTO THE INLAND VALLEYS AFTER 07Z. BASES WILL BE AROUND 1500-2000 FEET MSL...LIFTING TO 2000-2500 FEET OVERNIGHT. LOCAL VIS 4SM OR LESS WHERE CLOUDS HIT HIGHER TERRAIN INLAND. CLEARING SATURDAY EXPECTED BY 18-19Z.

&&

.MARINE...

130 PM...NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT LIKELY OVER THE OUTER COASTAL WATERS THIS AFTERNOON AND EVENING...STRONGEST NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THROUGH

LATE EVENING FOR THE OUTER WATERS. NO HAZARDOUS MARINE WEATHER IS EXPECTED FOR SATURDAY THROUGH TUESDAY.

&&

.SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY UNTIL 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY...
RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN
DIEGO COUNTY MOUNTAINS.

PZ...SMALL CRAFT ADVISORY FOR WINDS UNTIL 2 AM PDT SATURDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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PUBLIC...HARRISON AVIATION/MARINE...MM



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Department of Agronomy

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WWUS85 KPSR 262115

SPSPSR

SPECIAL WEATHER STATEMENT NATIONAL WEATHER SERVICE PHOENIX AZ 215 PM MST FRI SEP 26 2014

CAZ033-262215-

IMPERIAL CA-

215 PM PDT FRI SEP 26 2014

...SIGNIFICANT WEATHER ADVISORY...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A

SIGNIFICANT WEATHER ADVISORY FOR...
CENTRAL IMPERIAL COUNTY IN SOUTHEAST CALIFORNIA

UNTIL 315 PM PDT

AT 213 PM PDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED STRONG THUNDERSTORMS ALONG A LINE EXTENDING FROM 17 MILES NORTHEAST OF BRAWLEY TO 8 MILES NORTH OF HOLTVILLE TO CALEXICO...AND MOVING NORTH AT 25 MPH.

WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THESE STORMS...ALONG WITH HEAVY RAIN AND FREQUENT DANGEROUS LIGHTNING.

LOCATIONS IMPACTED INCLUDE...

EL CENTRO...

IMPERIAL...

BRAWLEY...

SOME UNSECURED OBJECTS COULD BE BLOWN AROUND. SEEK SHELTER INDOORS UNTIL THE STORM PASSES.

LAT...LON 3322 11554 3323 11513 3269 11513 3265 11562 TIME...MOT...LOC 2115Z 185DEG 22KT 3315 11530 3294 11540 3267 11543

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**MCLANE** 

September 27, 2014, Exceptional Event, Imperial County

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WUUS55 KPSR 262125

**SVRPSR** 

CAC025-262230-

/O.NEW.KPSR.SV.W.0069.140926T2125Z-140926T2230Z/

BULLETIN - EAS ACTIVATION REQUESTED SEVERE THUNDERSTORM WARNING NATIONAL WEATHER SERVICE PHOENIX AZ 225 PM PDT FRI SEP 26 2014

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A

- \* SEVERE THUNDERSTORM WARNING FOR...
  CENTRAL IMPERIAL COUNTY IN SOUTHEAST CALIFORNIA...
- \* UNTIL 330 PM PDT
- \* AT 219 PM PDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING DAMAGING WINDS IN EXCESS OF 60 MPH. IN ADDITION...AREAS OF BLOWING DUST AND HEAVY RAINFALL MAY ACCOMPANY THIS SEVERE STORM. THIS STORM WAS LOCATED NEAR ALAMORIO...OR 8 MILES EAST OF BRAWLEY...AND MOVING NORTHEAST AT 20 MPH.
- \* THE SEVERE THUNDERSTORM WILL BE NEAR...
  6 MILES SOUTHEAST OF WIEST BY 235 PM PDT...

LAT...LON 3337 11532 3324 11500 3282 11533 3293 11555 TIME...MOT...LOC 2124Z 208DEG 18KT 3297 11538

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**MCLANE** 



College of Ag

Department of Agronomy

September 27, 2014, Exceptional Event, Imperial County Appendix A

219

WUUS55 KPSR 262141

**SVRPSR** 

CAC025-262245-

/O.NEW.KPSR.SV.W.0071.140926T2141Z-140926T2245Z/

BULLETIN - EAS ACTIVATION REQUESTED SEVERE THUNDERSTORM WARNING NATIONAL WEATHER SERVICE PHOENIX AZ 241 PM PDT FRI SEP 26 2014

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A

- \* SEVERE THUNDERSTORM WARNING FOR... CENTRAL IMPERIAL COUNTY IN SOUTHEAST CALIFORNIA... THIS INCLUDES THE CITY OF EL CENTRO...
- \* UNTIL 345 PM PDT
- \* AT 235 PM PDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING DIME SIZE HAIL...AND DAMAGING WINDS IN EXCESS OF 60 MPH. THIS STORM WAS LOCATED NEAR HOLTVILLE...OR 7 MILES EAST OF IMPERIAL...AND MOVING NORTH AT 15 MPH.
- \* OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO ALAMORIO AND WIEST.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

IN ADDITION TO DAMAGING WINDS...FREQUENT DEADLY LIGHTNING IS OCCURRING. GET TO SHELTER INSIDE OF A STURDY BUILDING. REMEMBER...IF YOU CAN HEAR THUNDER...YOU ARE CLOSE ENOUGH TO BE STRUCK BY LIGHTNING.

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LAT...LON 3324 11544 3315 11514 3271 11536 3278 11557 TIME...MOT...LOC 2141Z 199DEG 13KT 3287 11542

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**MCLANE** 

Г **223** 

WUUS55 KPSR 262157

**SVRPSR** 

CAC025-065-262300-

/O.NEW.KPSR.SV.W.0072.140926T2157Z-140926T2300Z/

BULLETIN - EAS ACTIVATION REQUESTED SEVERE THUNDERSTORM WARNING NATIONAL WEATHER SERVICE PHOENIX AZ 257 PM PDT FRI SEP 26 2014

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A

- \* SEVERE THUNDERSTORM WARNING FOR...

  NORTH CENTRAL IMPERIAL COUNTY IN SOUTHEAST CALIFORNIA...

  CENTRAL RIVERSIDE COUNTY IN SOUTHERN CALIFORNIA...
- \* UNTIL 400 PM PDT
- \* AT 252 PM PDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING PENNY SIZE HAIL...AND DAMAGING WINDS IN EXCESS OF 60 MPH. THIS STORM WAS LOCATED 27 MILES SOUTHWEST OF NICHOLLS WARM SPRINGS...OR 28 MILES SOUTHEAST OF DESERT CENTER...AND MOVING NORTHEAST AT 15 MPH.
- \* OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO BLYTHE AIRPORT

PRECAUTIONARY/PREPAREDNESS ACTIONS...

IN ADDITION TO DAMAGING WINDS...FREQUENT DEADLY LIGHTNING IS OCCURRING. GET TO SHELTER INSIDE OF A STURDY BUILDING. REMEMBER...IF YOU CAN HEAR THUNDER...YOU ARE CLOSE ENOUGH TO BE STRUCK BY LIGHTNING.

&&

LAT...LON 3379 11498 3359 11465 3327 11508 3337 11529 TIME...MOT...LOC 2157Z 213DEG 15KT 3340 11511

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MCLANE

7 217 FXUS65 KPSR 262158 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
300 PM MST FRI SEP 26 2014

...SEVERE WEATHER THREAT OVER SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS ON SATURDAY...

### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE INTO...AND ACROSS THE DESERT SOUTHWEST FROM LATE TODAY INTO THE WEEKEND. THIS STORM...COMBINED WITH AMPLE LEFTOVER MONSOON MOISTURE...IS EXPECTED TO PRODUCE WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY ACROSS THE REGION. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY STRONG...EVEN DAMAGING WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST TO SPREAD EASTWARD OVER THE REGION FROM SUNDAY THROUGH THE MIDDLE OF NEXT WEEK.

&&

## .DISCUSSION...

TONIGHT AND SATURDAY...

AFTER A QUIET MORNING...THE COMBINATION OF A VERY MOIST AIRMASS FOR LATE SEPTEMBER...PWATS IN THE 1.50-1.80 INCH RANGE...SOLAR HEATING...AND A WEAK DISTURBANCE MOVING NORTHWARD FROM NORTHERN MEXICO...IS NOW BEGINNING TO TRIGGER SCATTERED THUNDERSTORMS ACROSS PIMA COUNTY...WITH SOME CELLS MOVING NORTHWARD INTO SW MARICOPA COUNTY THIS HOUR. THE LATEST RUN OF THE HRRR HI-RES MODEL IS NOW MOVING SCATTERED THUNDERSTORMS ACROSS MARICOPA COUNTY THROUGH THE REST OF THIS AFTERNOON AND EARLY EVENING...WITH ACTIVITY DIMINISHING AFTER SUNSET. THE MAIN IMPACT WILL BE LOCALLY HEAVY RAIN...GUSTY WINDS...AND BLOWING DUST.

THE MAIN EVENT...WHICH IS A STRONG PACIFIC LOW CENTER...IS STILL EXPECTED TO BEGIN TO IMPACT OUR CWA BEGINNING LATE TONIGHT...THEN CONTINUE INTO EARLY SUNDAY. THE COMBINATION OF A VERY RICH MOISTURE ENVIRONMENT AND STRONG VERTICAL WIND SHEAR THROUGH THE COLUMN...WITH SFC-6KM BULK SHEAR VALUES OF UP TO 50KTS IS EXPECTED TO GENERATE WIDESPREAD THUNDERSTORM ACTIVITY ACROSS THE WESTERN PORTION OF OUR CWA LATE TONIGHT...MAINLY ACROSS THE CO RIVER VALLEY AND OVER LA PAZ COUNTY. THE MAIN ISSUE WITH THESE STORMS WILL AGAIN BE HEAVY RAIN AND GUST WINDS...AND LOCAL FLOODING.

DEVELOPING STORM DYNAMICS...WITH INCREASING MONSOON MOISTURE ARE THEN EXPECTED TO BE STRONGEST OVER SOUTH CENTRAL AZ...INCLUDING PHOENIX...FROM LATE MORNING THROUGH THE MID-EVENING HOURS ON SATURDAY...WITH THE STORM PREDICTION CENTER KEEPING SOUTH-CENTRAL AZ IN A SLIGHT RISK AREA FOR SEVERE THUNDERSTORMS. AGAIN...THE COMBINATION OF FAVORABLE DIFLUENT FLOW...SFC-6KM BULK SHEAR VALUES

September 27, 2014, Exceptional Event, Imperial County
AS HIGH AS 50KTS...AND FAVORABLE TIME-OF-DAY...DURING THE AFTERNOON
HOURS...IS EXPECTED TO MAXIMIZE THE POTENTIAL FOR ORGANIZED SEVERE
STORM ACTIVITY. THE MAIN THREATS WILL BE HEAVY RAIN AND LARGE HAIL.
ALTHOUGH AN ISOLATED TORNADO IS POSSIBLE WITH THE STRONGEST
CONVECTION...THERE IS NOT A GREAT DEAL OF DIRECTIONAL SHEAR THROUGH
THE COLUMN...WHICH SHOULD MINIMIZE THE TORNADO THREAT...WITH LARGE
HAIL AND DAMAGING WINDS BEING THE MAIN THREATS.

SOME COMPARISONS HAVE ALREADY BEEN MADE BETWEEN THIS UPCOMING EVENT AND THE ONE THAT OCCURRED BACK ON 05 OCT 2010...WHICH BROUGHT SEVERE HAIL...UP TO 3 INCHES IN DIAMETER...HEAVY RAIN AND STRONG WINDS TO THE GREATER PHOENIX AREA. ALTHOUGH THE OVERALL UPPER AIR PATTERNS APPEAR TO BE SIMILAR FOR BOTH EVENTS...THE OCT 2010 EVENT HAD COLDER

AIR AT THE MID-LEVELS TO WORK WITH...500MB TEMPS DURING THAT EVENT WERE AROUND -14C...WHILE 500MB TEMPS ON SATURDAY ARE EXPECTED TO BE AROUND -9C. THE PARENT UPPER LOW CENTER DURING THE 2010 EVENT ALSO TRACKED A BIT FURTHER TO THE SOUTH...FROM PALMDALE CA TO LAS VEGAS...THEN INTO SOUTH-CENTRAL UT. THIS EVENT IS TAKING THE UPPER LOW CENTER FROM THE SFO BAY AREA ESE-WARD ACROSS SOUTH-CENTRAL NV...THEN INTO SOUTHERN UT. ON THE OTHER HAND...SATURDAY/S EVENT LOOKS LIKE IT WILL HAVE MORE AVAILABLE MOISTURE...WITH PWATS IN THE 1.50-1.75 INCH RANGE...AS COMPARED TO AMOUNTS IN THE 1.25-1.50 INCH DURING THE 2010 EVENT.

SHOWER/THUNDERSTORM ACTIVITY IS THEN EXPECTED TO RAPIDLY DIMINISH SATURDAY NIGHT ACROSS THE LOWER DESERTS OF SOUTH-CENTRAL ARIZONA AS THE SFC FRONT PASSES THOUGH AND DRIER AIR WORKS ITS WAY IN FROM THE WEST. ISOLATED TO SCATTERED SHOWER ACTIVITY WILL LIKELY LINGER INTO SUNDAY OVER THE HIGHER TERRAIN OF SOUTHERN GILA COUNTY DUE TO LOCAL UPSLOPE FLOW AND ANOTHER WEAK DISTURBANCE MOVING THROUGH THE REGION.

MONDAY THROUGH THURSDAY...

DRY WEATHER WITH NEAR...TO SLIGHTLY BELOW SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

&&

.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...

INCREASED MOISTURE WILL LEAD TO EARLY TO MID AFTERNOON SHOWERS AND THUNDERSTORMS OVER FAVORED HIGH TERRAIN AREAS. SOME OF THESE STORMS SHOULD MAKE THEIR WAY INTO THE PHOENIX AREA EARLY THIS EVENING...POSSIBLY AFFECTING AREA TERMINALS. A REMOTE THREAT FOR SHOWERS WILL REMAIN THROUGH THE OVERNIGHT HOURS FRIDAY NIGHT AHEAD OF AN APPROACHING COLD FRONT. WINDS WILL REMAIN LIGHT THROUGH THE PERIOD WITH ONLY A SMALL WINDOW OF WESTERLY DIRECTIONAL FLOW MAINLY LATE THIS AFTERNOON.

SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

WINDS WILL INCREASE THROUGH THE DAY TODAY WITH GUSTY WINDS EXPECTED THIS AFTERNOON. CHANCES FOR SHOWERS AND THUNDERSTORMS WILL INCREASE

September 27, 2014, Exceptional Event, Imperial County
AS THE DAY PROGRESSES WITH THE BEST CHANCE GENERALLY BETWEEN 21Z-03Z
TODAY...AND FAVORING THE LOWER COLORADO RIVER VALLEY. SOME
THUNDERSTORMS TODAY MAY BE STRONG...POTENTIALLY PRODUCING STRONG
OUTFLOW WINDS. A SMALL CHANCE OF MAINLY SHOWERS WILL REMAIN THROUGH
THE OVERNIGHT HOURS TONIGHT AHEAD OF AN APPROACHING COLD FRONT THAT
IS EXPECTED TO SWEEP THROUGH THE AREA SOME TIME SATURDAY MORNING.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...
SUNDAY THROUGH THURSDAY...

SHOWERS AND THUNDERSTORMS...MAINLY EAST OF PHOENIX...ARE POSSIBLE ON SUNDAY AS AN UPPER LEVEL TROUGH LINGERS OVER THE REGION. DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. AFTERNOON MINIMUM HUMIDITY LEVELS WILL AVERAGE AROUND 20 PERCENT ON SUNDAY...AND THEN TREND TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH ON SUNDAY...THOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...PERCHA
AVIATION...KUHLMAN
FIRE WEATHER...MCLANE



College of Ag

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FXUS65 KPSR 262215 AAA

**AFDPSR** 

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
312 PM MST FRI SEP 26 2014

.UPDATE...UPDATED AVIATION AND FIRE WEATHER DISCUSSIONS.

&&

...SEVERE WEATHER THREAT OVER SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS ON SATURDAY...

.SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE INTO...AND ACROSS THE DESERT SOUTHWEST FROM LATE TODAY INTO THE WEEKEND. THIS STORM...COMBINED WITH AMPLE LEFTOVER MONSOON MOISTURE...IS EXPECTED TO PRODUCE WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY ACROSS THE REGION. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY STRONG...EVEN DAMAGING WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST TO SPREAD EASTWARD OVER THE REGION FROM SUNDAY THROUGH THE MIDDLE OF NEXT WEEK.

&&

.DISCUSSION...

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AFTER A QUIET MORNING...THE COMBINATION OF A VERY MOIST AIRMASS FOR LATE SEPTEMBER...PWATS IN THE 1.50-1.80 INCH RANGE...SOLAR HEATING...AND A WEAK DISTURBANCE MOVING NORTHWARD FROM NORTHERN MEXICO...IS NOW BEGINNING TO TRIGGER SCATTERED THUNDERSTORMS ACROSS PIMA COUNTY...WITH SOME CELLS MOVING NORTHWARD INTO SW MARICOPA COUNTY THIS HOUR. THE LATEST RUN OF THE HRRR HI-RES MODEL IS NOW MOVING SCATTERED THUNDERSTORMS ACROSS MARICOPA COUNTY THROUGH THE REST OF THIS AFTERNOON AND EARLY EVENING...WITH ACTIVITY DIMINISHING AFTER SUNSET. THE MAIN IMPACT WILL BE LOCALLY HEAVY RAIN...GUSTY WINDS...AND BLOWING DUST.

THE MAIN EVENT...WHICH IS A STRONG PACIFIC LOW CENTER...IS STILL EXPECTED TO BEGIN TO IMPACT OUR CWA BEGINNING LATE TONIGHT...THEN CONTINUE INTO EARLY SUNDAY. THE COMBINATION OF A VERY RICH MOISTURE ENVIRONMENT AND STRONG VERTICAL WIND SHEAR THROUGH THE COLUMN...WITH SFC-6KM BULK SHEAR VALUES OF UP TO 50KTS IS EXPECTED TO GENERATE WIDESPREAD THUNDERSTORM ACTIVITY ACROSS THE WESTERN PORTION OF OUR CWA LATE TONIGHT...MAINLY ACROSS THE CO RIVER VALLEY AND OVER LA PAZ COUNTY. THE MAIN ISSUE WITH THESE STORMS WILL AGAIN BE HEAVY RAIN AND GUST WINDS...AND LOCAL FLOODING.

DEVELOPING STORM DYNAMICS...WITH INCREASING MONSOON MOISTURE ARE THEN EXPECTED TO BE STRONGEST OVER SOUTH CENTRAL AZ...INCLUDING

September 27, 2014, Exceptional Event, Imperial County PHOENIX...FROM LATE MORNING THROUGH THE MID-EVENING HOURS ON SATURDAY...WITH THE STORM PREDICTION CENTER KEEPING SOUTH-CENTRAL AZ IN A SLIGHT RISK AREA FOR SEVERE THUNDERSTORMS. AGAIN...THE COMBINATION OF FAVORABLE DIFLUENT FLOW...SFC-6KM BULK SHEAR VALUES AS HIGH AS 50KTS...AND FAVORABLE TIME-OF-DAY...DURING THE AFTERNOON HOURS...IS EXPECTED TO MAXIMIZE THE POTENTIAL FOR ORGANIZED SEVERE STORM ACTIVITY. THE MAIN THREATS WILL BE HEAVY RAIN AND LARGE HAIL. ALTHOUGH AN ISOLATED TORNADO IS POSSIBLE WITH THE STRONGEST CONVECTION...THERE IS NOT A GREAT DEAL OF DIRECTIONAL SHEAR THROUGH THE COLUMN...WHICH SHOULD MINIMIZE THE TORNADO THREAT...WITH LARGE HAIL AND DAMAGING WINDS BEING THE MAIN THREATS.

SOME COMPARISONS HAVE ALREADY BEEN MADE BETWEEN THIS UPCOMING EVENT

AND THE ONE THAT OCCURRED BACK ON 05 OCT 2010...WHICH BROUGHT SEVERE HAIL...UP TO 3 INCHES IN DIAMETER...HEAVY RAIN AND STRONG WINDS TO THE GREATER PHOENIX AREA. ALTHOUGH THE OVERALL UPPER AIR PATTERNS APPEAR TO BE SIMILAR FOR BOTH EVENTS...THE OCT 2010 EVENT HAD COLDER AIR AT THE MID-LEVELS TO WORK WITH...500MB TEMPS DURING THAT EVENT WERE AROUND -14C...WHILE 500MB TEMPS ON SATURDAY ARE EXPECTED TO BE AROUND -9C. THE PARENT UPPER LOW CENTER DURING THE 2010 EVENT ALSO TRACKED A BIT FURTHER TO THE SOUTH...FROM PALMDALE CA TO LAS VEGAS...THEN INTO SOUTH-CENTRAL UT. THIS EVENT IS TAKING THE UPPER LOW CENTER FROM THE SFO BAY AREA ESE-WARD ACROSS SOUTH-CENTRAL NV...THEN INTO SOUTHERN UT. ON THE OTHER HAND...SATURDAY/S EVENT LOOKS LIKE IT WILL HAVE MORE AVAILABLE MOISTURE...WITH PWATS IN THE 1.50-1.75 INCH RANGE...AS COMPARED TO AMOUNTS IN THE 1.25-1.50 INCH DURING THE 2010 EVENT.

SHOWER/THUNDERSTORM ACTIVITY IS THEN EXPECTED TO RAPIDLY DIMINISH SATURDAY NIGHT ACROSS THE LOWER DESERTS OF SOUTH-CENTRAL ARIZONA AS THE SFC FRONT PASSES THOUGH AND DRIER AIR WORKS ITS WAY IN FROM THE WEST. ISOLATED TO SCATTERED SHOWER ACTIVITY WILL LIKELY LINGER INTO SUNDAY OVER THE HIGHER TERRAIN OF SOUTHERN GILA COUNTY DUE TO LOCAL UPSLOPE FLOW AND ANOTHER WEAK DISTURBANCE MOVING THROUGH THE REGION.

# MONDAY THROUGH THURSDAY...

DRY WEATHER WITH NEAR...TO SLIGHTLY BELOW SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

&&

9/17/2018

## .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

EXPECT SHOWER AND THUNDERSTORM ACTIVITY ACROSS THE AREA THIS AFTERNOON/EVENING UNTIL AROUND 03Z...WITH SCT-BKN CLOUD DECKS GENERALLY AOA 7000FT PERSISTING OVERNIGHT INTO SATURDAY. LOCAL CIGS MAY DROP TO 6000FT WITH STRONGER CELLS...AND VISIBILITY BRIEFLY LOWER TO 2SM IN HEAVY RAIN OR BLDU. SHEAR PROFILES ALOFT ALSO SUPPORT AN ORGANIZED/SEVERE THUNDERSTORM ENVIRONMENT...ESPECIALLY NEAR KBLH...HOWEVER ISOLD STORMS COULD IMPACT ALL TERMINALS AT SOME TIME THROUGH SATURDAY AFTERNOON...WITH SURFACE WIND GUSTS UP TO 55KT POSSIBLE ALONG WITH HAIL. LIGHTER WINDS ANTICIPATED OVERNIGHT...

September 27, 2014, Exceptional Event, Imperial County BUT WITH A LINGERING/REMOTE THREAT FOR SHOWERS. LATE SATURDAY MORNING...SURFACE WINDS ONCE AGAIN INCREASE AFTER 15Z WITH THE PASSAGE OF A COLD FRONT...ALONG WITH THE AREA-WIDE THUNDERSTORM POTENTIAL.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST

PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH EARLY SUNDAY...ALTHOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...PERCHA
AVIATION...MEYERS

FIRE WEATHER...MEYERS/MCLANE



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FLUS45 KPSR 262217

IMPERIAL COUNTY-

**HWOPSR** 

HAZARDOUS WEATHER OUTLOOK NATIONAL WEATHER SERVICE PHOENIX AZ 317 PM MST FRI SEP 26 2014

AZZ020>028-CAZ031>033-272230-

LOWER COLORADO RIVER VALLEY AZ-WEST CENTRAL DESERTSNORTHWEST MARICOPA COUNTY-GREATER PHOENIX AREASOUTHERN GILA COUNTY/TONTO NATIONAL FOREST FOOTHILLSYUMA/MARTINEZ LAKE AND VICINITY-SOUTHWEST DESERTSSOUTHWEST MARICOPA COUNTY-NORTHWEST AND NORTH CENTRAL PINAL COUNTYLOWER COLORADO RIVER VALLEY CA-RIVERSIDE COUNTY/EASTERN DESERTS-

317 PM MST FRI SEP 26 2014 /317 PM PDT FRI SEP 26 2014/

...SEVERE WEATHER THREAT OVER SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS ON SATURDAY...

THIS HAZARDOUS WEATHER OUTLOOK IS FOR EAST-CENTRAL ARIZONA...EXTREME SOUTHWEST ARIZONA...EXTREME WEST-CENTRAL ARIZONA...SOUTH-CENTRAL ARIZONA...SOUTHWEST ARIZONA...WEST-CENTRAL ARIZONA AND EXTREME SOUTHEAST CALIFORNIA.

.DAY ONE...THIS AFTERNOON AND TONIGHT.

SCATTERED SHOWERS AND THUNDERSTORMS TO CONTINUE INTO THE EVENING HOURS ACROSS THE REGION. LOCALLY HEAVY RAIN...GUSTY WINDS...AND BLOWING DUST IS POSSIBLE.

.DAYS TWO THROUGH SEVEN...SATURDAY THROUGH THURSDAY.

A PACIFIC WEATHER SYSTEM WILL DRAW MOISTURE NORTHWARD ACROSS ARIZONA...PRODUCING WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY FROM LATE FRIDAY NIGHT INTO SUNDAY...MAINLY FROM THE LOWER COLORADO RIVER VALLEY EASTWARD. THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING STRONG...POSSIBLY DAMAGING WINDS...LOCALLY HEAVY RAIN...AND LARGE HAIL.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION MAY BE NEEDED.

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NATIONAL WEATHER SERVICE PHOENIX IS ON THE INTERNET AT

WEATHER.GOV/PHOENIX

г 909

WUUS55 KPSR 262220

**SVRPSR** 

CAC025-262315-

/O.NEW.KPSR.SV.W.0074.140926T2220Z-140926T2315Z/

BULLETIN - EAS ACTIVATION REQUESTED SEVERE THUNDERSTORM WARNING NATIONAL WEATHER SERVICE PHOENIX AZ 320 PM PDT FRI SEP 26 2014

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A

- \* SEVERE THUNDERSTORM WARNING FOR...
  CENTRAL IMPERIAL COUNTY IN SOUTHEAST CALIFORNIA...
- \* UNTIL 415 PM PDT
- \* AT 314 PM PDT...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A SEVERE THUNDERSTORM CAPABLE OF PRODUCING DIME SIZE HAIL...AND DAMAGING WINDS IN EXCESS OF 60 MPH. THIS STORM WAS LOCATED 6 MILES EAST OF HOLTVILLE...OR 15 MILES NORTHEAST OF CALEXICO...AND MOVING NORTHEAST AT 15 MPH.
- \* OTHER LOCATIONS IN THE WARNING INCLUDE BUT ARE NOT LIMITED TO GLAMIS.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

IN ADDITION TO DAMAGING WINDS...FREQUENT DEADLY LIGHTNING IS OCCURRING. GET TO SHELTER INSIDE OF A STURDY BUILDING. REMEMBER...IF YOU CAN HEAR THUNDER...YOU ARE CLOSE ENOUGH TO BE STRUCK BY LIGHTNING.

&&

LAT...LON 3314 11507 3293 11486 3268 11527 3282 11541 TIME...MOT...LOC 2220Z 229DEG 15KT 3281 11526

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**MCLANE** 

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WGUS85 KPSR 262248

**FLSPSR** 

FLOOD ADVISORY NATIONAL WEATHER SERVICE PHOENIX AZ 348 PM MST FRI SEP 26 2014

CAC025-270045-

/O.NEW.KPSR.FA.Y.0177.140926T2248Z-140927T0045Z/ /00000.N.ER.000000T0000Z.000000T0000Z.00/ IMPERIAL CA-348 PM PDT FRI SEP 26 2014

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED AN

- \* URBAN AND SMALL STREAM FLOOD ADVISORY FOR...
  CENTRAL IMPERIAL COUNTY IN SOUTHEAST CALIFORNIA...
- \* UNTIL 545 PM PDT
- \* AT 345 PM PDT THUNDERSTORMS OVER THE ADVISORY AREA HAVE PRODUCED HEAVY RAIN. DOPPLER RADAR ESTIMATES THAT ONE TO ONE AND ONE HALF INCHES OF RAIN HAS FALLEN SINCE 230 PM THIS AFTERNOON. THIS WILL CAUSE NORMALLY DRY WASHES TO BEGIN RUNNING AS WELL AS PONDING OF WATER ON ROADWAYS AND LOW LYING AREAS.
- \* LOCATIONS THAT MAY EXPERIENCE MINOR FLOODING INCLUDE BUT ARE NOT LIMITED TO CALEXICO...CLAMIS...AND INTERSTATE 8 EAST OF IMPERIAL.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

MOST FLOOD DEATHS OCCUR IN AUTOMOBILES. NEVER DRIVE YOUR VEHICLE INTO AREAS WHERE THE WATER COVERS THE ROADWAY. JUST ONE FOOT OF FLOWING WATER CAN BE POWERFUL ENOUGH TO SWEEP VEHICLES OFF THE ROAD. WHEN ENCOUNTERING FLOODED ROADS MAKE THE SMART CHOICE...TURN AROUND...DONT DROWN.

TO REPORT FLOODING...HAVE THE NEAREST LAW ENFORCEMENT AGENCY RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST OFFICE.

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LAT...LON 3266 11549 3318 11520 3304 11477 3269 11505

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**MCLANE** 

152

WWUS55 KPSR 262309

**SVSPSR** 

SEVERE WEATHER STATEMENT NATIONAL WEATHER SERVICE PHOENIX AZ 409 PM MST FRI SEP 26 2014

CAC025-262318-

/O.EXP.KPSR.SV.W.0074.000000T0000Z-140926T2315Z/IMPERIAL CA-

409 PM PDT FRI SEP 26 2014

...THE SEVERE THUNDERSTORM WARNING FOR CENTRAL IMPERIAL COUNTY WILL EXPIRE AT 415 PM MST...

THE THUNDERSTORM OVER CENTRAL IMPERIAL COUNTY HAS DECREASED IN INTENSITY. THE WARNING THAT WAS IN EFFECT WILL THEREFORE BE ALLOWED TO EXPIRE. HEAVY RAIN AND LIGHTNING ARE STILL POSSIBLE WITH THIS STORM.

REPORT SEVERE WEATHER TO THE NEAREST LAW ENFORCEMENT AGENCY. THEY WILL RELAY YOUR REPORT TO THE NATIONAL WEATHER SERVICE FORECAST OFFICE.

LAT...LON 3314 11507 3293 11486 3268 11527 3282 11541 TIME...MOT...LOC 2308Z 229DEG 15KT 3294 11508

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**MCLANE** 



College of Ag

Department of Agronomy

# **Department of Agronomy**

716 Farm House Ln Ames, IA 50011

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WWUS75 KPSR 262332

**NPWPSR** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE PHOENIX AZ 432 PM MST FRI SEP 26 2014

AZZ025-026-CAZ031-033-270100/O.NEW.KPSR.DU.Y.0044.140926T2332Z-140927T0100Z/
YUMA/MARTINEZ LAKE AND VICINITY-SOUTHWEST DESERTSLOWER COLORADO RIVER VALLEY CA-IMPERIAL COUNTYINCLUDING THE CITIES OF...FORTUNA FOOTHILLS...YUMA...TACNA...

WELLTON...BLYTHE...BRAWLEY...CALEXICO...EL CENTRO
432 PM MST FRI SEP 26 2014 /432 PM PDT FRI SEP 26 2014/

...BLOWING DUST ADVISORY IN EFFECT UNTIL 6 PM MST /6 PM PDT/ THIS EVENING...

THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A BLOWING DUST ADVISORY...WHICH IS IN EFFECT UNTIL 6 PM MST /6 PM PDT/ THIS EVENING.

- \* AFFECTED AREA...INTERSTATE CORRIDOR BETWEEN EL CENTRO IN SOUTH CENTRAL IMPERIAL COUNTY AND SOUTHWEST YUMA COUNTY.
- \* TIMING...UNTIL 6PM THIS EVENING.
- \* WINDS...30 TO 40 MPH.
- \* VISIBILITY...LESS THAN ONE HALF MILE IN SOME AREAS.
- \* IMPACTS...VISIBILITIES COULD DROP SUDDENLY RESULTING IN HAZARDOUS TRAVEL CONDITIONS ALONG ROADWAYS INCLUDING INTERSTATE 8.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

BE READY FOR A SUDDEN DROP IN VISIBILITY. IF YOU ENCOUNTER BLOWING DUST OR BLOWING SAND ON THE ROADWAY OR SEE IT APPROACHING...PULL OFF THE ROAD AS FAR AS POSSIBLE AND PUT YOUR VEHICLE IN PARK. TURN THE LIGHTS ALL THE WAY OFF AND KEEP YOUR FOOT OFF THE BRAKE PEDAL.

REMEMBER...PULL ASIDE...STAY ALIVE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

903

WWUS75 KPSR 270101

**NPWPSR** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE PHOENIX AZ 601 PM MST FRI SEP 26 2014

AZZ025-026-CAZ031-033-270215-

/O.EXP.KPSR.DU.Y.0044.000000T0000Z-140927T0100Z/
YUMA/MARTINEZ LAKE AND VICINITY-SOUTHWEST DESERTSLOWER COLORADO RIVER VALLEY CA-IMPERIAL COUNTYINCLUDING THE CITIES OF...FORTUNA FOOTHILLS...YUMA...TACNA...
WELLTON...BLYTHE...BRAWLEY...CALEXICO...EL CENTRO
601 PM MST FRI SEP 26 2014 /601 PM PDT FRI SEP 26 2014/

...BLOWING DUST ADVISORY HAS EXPIRED...

THE BLOWING DUST ADVISORY IS NO LONGER IN EFFECT. STORMS HAVE WEAKENED AND THE THREAT FOR WIDESPREAD BLOWING DUST HAS DIMINISHED.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

# IOWA STATE UNIVERSITY

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Department of Agronomy

# **Department of Agronomy**

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T 300 FXUS65 KPSR 270320 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
820 PM MST FRI SEP 26 2014

...SEVERE WEATHER THREAT OVER SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS ON SATURDAY...

### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE THROUGH THE REGION ON SATURDAY. THIS STORM...COMBINED WITH AMPLE LEFTOVER MONSOON MOISTURE...IS EXPECTED TO PRODUCE WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY ACROSS THE REGION. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY STRONG...EVEN DAMAGING WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST TO SPREAD EASTWARD OVER THE REGION FROM SUNDAY THROUGH THE MIDDLE OF NEXT WEEK.

&&

### .DISCUSSION...

CONVECTION HAS LARGELY DIED OFF ACROSS THE DESERTS THIS EVENING AND HAS SINCE SHIFTED NORTHWARD INTO ARIZONA AND NEVADA. RADAR AND SATELLITE TRENDS INDICATE NEW ISOLATED CONVECTION IS BEGINNING TO FORM ACROSS EASTERN ARIZONA...ALONG THE COLORADO RIVER...AND SOUTH OF YUMA OVER SONORA IN AN AREA OF LEFTOVER ELEVATED INSTABILITY. THE UPPER LOW FORECAST TO MOVE THROUGH THE REGION ON SATURDAY AND ITS ASSOCIATED FORCING AND SHEAR REMAIN WELL TO OUR WEST THIS EVENING...STILL LOCATED OVER CENTRAL CALIFORNIA AS OF 03Z.

CONVECTION IS STILL EXPECTED TO DEVELOP LATE TONIGHT/EARLY SATURDAY MORNING WITH THE PRIMARY FOCUS ALONG THE LOWER COLORADO RIVER...THEN TRANSITION EASTWARD INTO THE PHOENIX AREA DURING THE DAY ON SATURDAY. THE INCOMING 00Z MODELS ARE STILL ON TRACK AND NO MAJOR CHANGES WERE MADE TO THE FORECAST. ONLY NOTEWORTHY REVISIONS WERE A SLIGHT REDUCTION IN POPS FOR THE REST OF THIS EVENING WITH ACTIVITY PICKING UP ONCE AGAIN AFTER MIDNIGHT. HRRR SEEMS TO BE HANDLING THE PRESENT SITUATION THE BEST OF ANY OPERATIONAL MODEL AND WAS LEANED UPON HEAVILY FOR THE REST OF THE EVENING/OVERNIGHT HOURS.

&&

.PREVIOUS DISCUSSION...

SATURDAY...

THE MAIN EVENT...WHICH IS A STRONG PACIFIC LOW CENTER...IS STILL EXPECTED TO BEGIN TO IMPACT OUR CWA BEGINNING LATE TONIGHT...THEN CONTINUE INTO EARLY SUNDAY. THE COMBINATION OF A VERY RICH MOISTURE ENVIRONMENT AND STRONG VERTICAL WIND SHEAR THROUGH THE COLUMN...WITH SFC-6KM BULK SHEAR VALUES OF UP TO 50KTS IS EXPECTED TO GENERATE WIDESPREAD THUNDERSTORM ACTIVITY ACROSS THE WESTERN PORTION OF OUR

September 27, 2014, Exceptional Event, Imperial County CWA LATE TONIGHT...MAINLY ACROSS THE CO RIVER VALLEY AND OVER LA PAZ COUNTY. THE MAIN ISSUE WITH THESE STORMS WILL AGAIN BE HEAVY RAIN AND GUST WINDS...AND LOCAL FLOODING.

DEVELOPING STORM DYNAMICS...WITH INCREASING MONSOON MOISTURE ARE THEN EXPECTED TO BE STRONGEST OVER SOUTH CENTRAL AZ...INCLUDING PHOENIX...FROM LATE MORNING THROUGH THE MID-EVENING HOURS ON SATURDAY...WITH THE STORM PREDICTION CENTER KEEPING SOUTH-CENTRAL AZ IN A SLIGHT RISK AREA FOR SEVERE THUNDERSTORMS. AGAIN...THE COMBINATION OF FAVORABLE DIFLUENT FLOW...SFC-6KM BULK SHEAR VALUES AS HIGH AS 50KTS...AND FAVORABLE TIME-OF-DAY...DURING THE AFTERNOON HOURS...IS EXPECTED TO MAXIMIZE THE POTENTIAL FOR ORGANIZED SEVERE STORM ACTIVITY. THE MAIN THREATS WILL BE HEAVY RAIN AND LARGE HAIL.

ALTHOUGH AN ISOLATED TORNADO IS POSSIBLE WITH THE STRONGEST CONVECTION...THERE IS NOT A GREAT DEAL OF DIRECTIONAL SHEAR THROUGH THE COLUMN...WHICH SHOULD MINIMIZE THE TORNADO THREAT...WITH LARGE HAIL AND DAMAGING WINDS BEING THE MAIN THREATS.

SOME COMPARISONS HAVE ALREADY BEEN MADE BETWEEN THIS UPCOMING EVENT AND THE ONE THAT OCCURRED BACK ON 05 OCT 2010...WHICH BROUGHT SEVERE HAIL...UP TO 3 INCHES IN DIAMETER...HEAVY RAIN AND STRONG WINDS TO THE GREATER PHOENIX AREA. ALTHOUGH THE OVERALL UPPER AIR PATTERNS APPEAR TO BE SIMILAR FOR BOTH EVENTS...THE OCT 2010 EVENT HAD COLDER AIR AT THE MID-LEVELS TO WORK WITH...500MB TEMPS DURING THAT EVENT WERE AROUND -14C...WHILE 500MB TEMPS ON SATURDAY ARE EXPECTED TO BE AROUND -9C. THE PARENT UPPER LOW CENTER DURING THE 2010 EVENT ALSO TRACKED A BIT FURTHER TO THE SOUTH...FROM PALMDALE CA TO LAS VEGAS...THEN INTO SOUTH-CENTRAL UT. THIS EVENT IS TAKING THE UPPER LOW CENTER FROM THE SFO BAY AREA ESE-WARD ACROSS SOUTH-CENTRAL NV...THEN INTO SOUTHERN UT. ON THE OTHER HAND...SATURDAY/S EVENT LOOKS LIKE IT WILL HAVE MORE AVAILABLE MOISTURE...WITH PWATS IN THE 1.50-1.75 INCH RANGE...AS COMPARED TO AMOUNTS IN THE 1.25-1.50 INCH DURING THE 2010 EVENT.

SHOWER/THUNDERSTORM ACTIVITY IS THEN EXPECTED TO RAPIDLY DIMINISH SATURDAY NIGHT ACROSS THE LOWER DESERTS OF SOUTH-CENTRAL ARIZONA AS THE SFC FRONT PASSES THOUGH AND DRIER AIR WORKS ITS WAY IN FROM THE WEST. ISOLATED TO SCATTERED SHOWER ACTIVITY WILL LIKELY LINGER INTO SUNDAY OVER THE HIGHER TERRAIN OF SOUTHERN GILA COUNTY DUE TO LOCAL UPSLOPE FLOW AND ANOTHER WEAK DISTURBANCE MOVING THROUGH THE REGION.

MONDAY THROUGH THURSDAY...

DRY WEATHER WITH NEAR...TO SLIGHTLY BELOW SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

&&

9/17/2018

.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

SHOWERS HAVE DIED OFF AS OF 03Z BUT WILL REDEVELOP OVERNIGHT.

CONFIDENCE IN EXACTLY WHERE/WHEN STORMS WILL FORM IS LOW BUT SUFFICE
TO SAY THAT ANY STORMS THAT DEVELOP DURING THE DAY ON SATURDAY WILL

September 27, 2014, Exceptional Event, Imperial County
BE MORE THAN CAPABLE OF PRODUCING STRONG WINDS AND IMPACTING THE
TERMINALS. STORMS WILL BE MOST LIKELY ACROSS THE WESTERN TERMINALS
OVERNIGHT...SHIFTING EASTWARD INTO THE PHOENIX METRO SATURDAY
MORNING/AFTERNOON. ACTIVITY WILL QUIET DOWN SATURDAY EVENING AS THE
UPPER LOW EXITS THE AREA.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO

NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH EARLY SUNDAY...ALTHOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...LEINS/PERCHA

AVIATION...LEINS

FIRE WEATHER...MEYERS/MCLANE



College of Ag

Department of Agronomy

989 FXUS66 KSGX 270439 AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
930 PM PDT FRI SEP 26 2014

# .SYNOPSIS...

COOLER SATURDAY AS A DEEP TROUGH MOVES INLAND ACROSS CENTRAL CALIFORNIA. THE TROUGH WILL DEEPEN THE MARINE LAYER WITH LOW CLOUDS SPREADING INTO THE VALLEYS...AND ALSO BRING GUSTY WEST WINDS TO THE MOUNTAINS AND DESERTS SATURDAY. A SHOWER OR TWO MAY OCCUR OVER THE SAN BERNARDINO COUNTY MOUNTAINS LATE SATURDAY THROUGH LATE SUNDAY. THE WEATHER WILL TURN WARMER EARLY NEXT WEEK AS HIGH PRESSURE ALOFT SLOWLY BUILDS OVER THE REGION.

&&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

STRONG THUNDERSTORMS ERUPTED IN THE UNSTABLE AIRMASS OVER IMPERIAL COUNTY THIS AFTERNOON. MEANWHILE...JUST 70 MILES TO THE WEST OVER THE RIVERSIDE AND SAN DIEGO COUNTY MOUNTAINS...STANDING LENTICULAR CLOUDS WERE INDICATIVE OF A MORE STABLE AIRMASS ALOFT.

THE 00Z NKX SOUNDING WAS DRIER AND COOLER THAN THE 12Z SOUNDING IN RESPONSE TO THE ADVANCING LONG WAVE TROUGH DEEPENING ALONG THE WEST COAST. THE WATER VAPOR LOOP SHOWS A SPEED MAX ROUNDING THE BASE OF THE TROUGH NEAR PT CONCEPTION THIS EVENING. THIS TROUGH DEVELOPS INTO A CLOSED LOW OVERNIGHT WITH SEVERAL STRONG VORT MAXES PINWHEELING AROUND THE CLOSED LOW THIS WEEKEND. ONE STRONG VORT MAX MOVES ACROSS SOCAL SATURDAY AFTERNOON FOLLOWED BY A SECOND VORT MAX SUNDAY AFTERNOON. THE LACK OF MOISTURE IS THE LIMITING FACTOR FOR PRECIP THIS WEEKEND AS THE AIRMASS OVER SOCAL DRIES OUT QUICKLY TONIGHT. PWATS FALL TO 0.50"-0.75" SATURDAY MORNING...SO CHANCES FOR SHOWERS WILL BE SMALL AND LIKELY LIMITED TO THE SAN BERNARDINO MTNS. PWATS INCREASE SLIGHTLY ON SUNDAY TO BETWEEN 0.75"-1.00" AHEAD OF THE SECOND VORT MAX FOR SLIGHTLY BETTER CHANCES FOR SHOWERS IN THE SAN BERNARDINO MOUNTAINS.

WHILE THE PRECIP CHANCES WILL BE SMALL THIS WEEKEND...GUSTY MTN AND DESERT WINDS ARE LIKELY. THE JET CORE ALOFT...STRONGER MID LEVEL WESTERLY WINDS AND INCREASING ONSHORE SFC GRADIENTS ALL LEND SUPPORT TO A WIND ADVISORY FOR THE RIVERSIDE AND SAN DIEGO COUNTY MOUNTAINS AND DESERTS. STRONGEST WINDS WILL FUNNEL THROUGH THE SAN GORGONIO PASS INTO THE NORTHERN COACHELLA VALLEY. WEAK ROTORS ARE POSSIBLE IN THE COACHELLA VALLEYS THIS WEEKEND BUT SURFACING MOUNTAIN WAVES ARE UNLIKELY.

THE TROUGH WILL BRING MUCH COOLER WEATHER AND A DEEPER MARINE LAYER

MONDAY THROUGH WEDNESDAY...THE TROUGH LIFTS NORTHEAST WITH INCREASING HEIGHTS AND WARMER DAYS. THE MODELS ARE IN DECENT AGREEMENT WITH A RIDGE MOVING OVER THE REGION THURSDAY INTO FRIDAY FOR WEAK TO MODERATE OFFSHORE FLOW AND EVEN GREATER WARMING TOWARD THE END OF THE WEEK.

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## .AVIATION...

270300Z...LOW CLOUDS WILL CONTINUE TO FORM ALONG THE COAST THIS EVENING...GRADUALLY PRODUCING CIGS AT THE COASTAL AIRPORTS BY 27/07Z

AND INTO THE INLAND VALLEYS OVERNIGHT. BASES WILL BE AROUND 1500-2000 FEET MSL...LIFTING TO 2000-2500 FEET OVERNIGHT. LOCAL VIS 4SM OR LESS WHERE CLOUDS MEET HIGHER TERRAIN INLAND. SCATTERING OF LOW CLOUDS EXPECTED BY 27/18-19Z WITH AN EARLY RETURN AGAIN SATURDAY EVENING.

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## .MARINE...

800 PM...NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT LIKELY OVER THE OUTER COASTAL WATERS THROUGH TONIGHT...STRONGEST NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THROUGH 2 AM PDT SATURDAY MORNING FOR THE OUTER WATERS. NO HAZARDOUS MARINE WEATHER IS EXPECTED FOR THE REST OF SATURDAY THROUGH TUESDAY.

&&

## .SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY UNTIL 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY... RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN DIEGO COUNTY MOUNTAINS.

PZ...SMALL CRAFT ADVISORY FOR WINDS UNTIL 2 AM PDT SATURDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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PUBLIC...MOEDE AVIATION/MARINE...TS

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WWUS76 KSGX 270454

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 954 PM PDT FRI SEP 26 2014

...STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH EARLY SUNDAY MORNING...

.A TROUGH OF LOW PRESSURE MOVING INLAND OVER CENTRAL CALIFORNIA WILL BRING STRONG ONSHORE FLOW TO SOUTHERN CALIFORNIA...RESULTING IN STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH EARLY SUNDAY. WINDS WILL PEAK DURING THE EVENING THROUGH EARLY MORNING HOURS.

CAZ056-058-061-062-271300-

/O.CON.KSGX.WI.Y.0047.000000T0000Z-140928T1100Z/
RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINSCOACHELLA VALLEY-SAN DIEGO COUNTY DESERTS954 PM PDT FRI SEP 26 2014

...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 AM PDT SUNDAY...

A WIND ADVISORY REMAINS IN EFFECT UNTIL 4 AM PDT SUNDAY.

- \* TIMING...THROUGH EARLY SUNDAY MORNING.
- \* LOCATIONS...ALONG MOUNTAIN RIDGES...DESERT SLOPES...THROUGH AND BELOW CANYONS AND PASSES...AND INTO ADJACENT DESERT AREAS. IN THE COACHELLA VALLEY...THROUGH AND BELOW THE SAN GORGONIO PASS AND NORTH OF INTERSTATE 10. INTERSTATE 8 IN THE SAN DIEGO COUNTY MOUNTAINS AND DESERT WILL BE IMPACTED AS WELL.
- \* VISIBILITY...MAY BE REDUCED IN THE DESERT DUE TO BLOWING DUST.
- \* IMPACTS...THE WINDS MAY MAKE FOR DIFFICULT DRIVING CONDITIONS...ESPECIALLY FOR HIGH PROFILE VEHICLES. WATCH OUT FOR BROKEN TREE LIMBS. BLOWING DUST IN THE DESERT COULD MAKE IT DIFFICULT TO TRAVEL.
- \* OUTLOOK...WINDS WILL DIMINISH BY LATE SUNDAY MORNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A WIND ADVISORY MEANS THAT WINDS OF 35 MPH OR GUSTS OF 45 MPH OR GREATER ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

609

FXUS65 KPSR 270928 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
230 AM MST SAT SEP 27 2014

...SEVERE WEATHER THREAT OVER SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS ON SATURDAY...

### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE THROUGH THE REGION TODAY. THIS STORM...COMBINED WITH AMPLE MONSOON MOISTURE...IS EXPECTED TO PRODUCE WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY ACROSS A LARGE PART OF ARIZONA. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY STRONG...EVEN DAMAGING WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST TO SPREAD ACROSS THE REGION FROM SUNDAY THROUGH THE MIDDLE OF NEXT WEEK.

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.DISCUSSION...

TODAY AND TONIGHT...

A MASSIVE COOL PACIFIC LOW PRESSURE SYSTEM CONTINUED TO MOVE TOWARD AZ EARLY THIS MORNING. INCREASED SOUTHWESTERLY AND DIFLUENT JETSTREAM WINDS CONTINUED TO DEVELOP WIDESPREAD CONVECTION AND HEAVY RAIN OVER NORTHWEST AZ OVERNIGHT...WEAKLY TRAILING INTO PARTS OF SOUTHWEST AZ AT 2 AM. INCREASING SHOWERS AND THUNDERSTORMS HAD ALSO DEVELOP IN PARTS OF EASTERN MARICOPA COUNTY AT THIS TIME.

CONVECTION WAS FEEDING OFF A DENSE LOW LEVEL SUBTROPICAL MOISTURE PLUME MOVING NORTH UP THE COLORADO RIVER VALLEY AND PARTS OF SOUTHWEST AZ AHEAD OF THE COLD FRONT. THANKS TO THE YUMA PROVING GROUNDS...MULTIPLE LATE FRIDAY AFTERNOON WEATHER BALLOONS WERE LAUNCHED DETECTING THIS MOISTURE PLUME...AND SHOWING MOISTURE LEVELS WERE EXCESSIVE BELOW 8 THSD FEET.

AS THE PACIFIC TROF SLOWLY ADVANCES TOWARD AZ THIS MORNING AND AFTERNOON...STRONG UPPER LEVEL DIFLUENT FLOW OVER THE RICH LOW LEVEL MOISTURE PLUME WILL GENERATE WIDESPREAD SHOWERS AND THUNDERSTORMS OVER PARTS OF SOUTHWEST AND SOUTH CENTRAL AZ TODAY...INCLUDING PHOENIX. AT 2 AM THE NEXT IN A SERIES OF SHORTWAVES...ROTATING AROUND THE BROADER WESTERN STATES LOW PRESSURE CIRCULATION...WAS ON THE DOORSTEP OF SAN DIEGO AND POISED TO ROTATE INTO AZ LATER THIS MORNING.

ADDITIONALLY...VERTICAL WIND SHEAR WILL ALSO COME INTO PLAY SUGGESTING THE POSSIBILITY OF ORGANIZED AND SEVERE AFTERNOON CONVECTION...REPLETE WITH STRONG SURFACE GUSTS AND LARGE HAIL. THE STORM PREDICTION CENTER...SPC...CONTINUES TO PUT NEARLY THE ENTIRE WESTERLY HALF OF AZ UNDER A SLIGHT RISK OF SEVERE WEATHER TODAY.

# September 27, 2014, Exceptional Event, Imperial County

EARLIER FORECASTS WITH HIGH PRECIP PROBABILITIES AND THE THREAT FOR HEAVY RAIN OVER PARTS OF SOUTHWEST AND SOUTH CENTRAL ARIZONA WILL CONTINUE...SO VERY LITTLE FORECAST CHANGES WERE MADE ON THIS SHIFT.

FOR TONIGHT...UPPER LEVEL STORM DYNAMICS AND THE DEEP MOISTURE PLUME WILL SHIFT INTO EASTERN AZ THIS EVENING WITH THE COLD FRONT.

THEREFORE PRECIP PROBABILITIES WILL TAPER OFF SIGNIFICANTLY OVER SOUTHWEST AND SOUTH CENTRAL AZ THIS EVENING...BUT CONTINUE OVER MOUNTAINOUS SOUTHERN GILA COUNTY THROUGH SUNDAY MORNING.

# SUNDAY...

A MUCH DRIER AIRMASS WILL SPREAD ACROSS SOUTHEAST CA...SOUTHWEST AND SOUTH CENTRAL AZ SUNDAY. HOWEVER...DEEP MOISTURE WILL CONTINUE ALONG THE EASTERN AZ BORDER UNTIL SUNDAY NIGHT. A THREAT OF SHOWERS AND THUNDERSTORMS WILL LINGER OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY SUNDAY...DRY ELSEWHERE IN OUR FORECAST AREA.

# MONDAY THROUGH WEDNESDAY...

DRY WEATHER WITH NEAR SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

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### .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

SHOWERS HAVE DIED OFF AS OF 03Z BUT WILL REDEVELOP OVERNIGHT.

CONFIDENCE IN EXACTLY WHERE/WHEN STORMS WILL FORM IS LOW BUT SUFFICE
TO SAY THAT ANY STORMS THAT DEVELOP DURING THE DAY ON SATURDAY WILL
BE MORE THAN CAPABLE OF PRODUCING STRONG WINDS AND IMPACTING THE
TERMINALS. STORMS WILL BE MOST LIKELY ACROSS THE WESTERN TERMINALS
OVERNIGHT...SHIFTING EASTWARD INTO THE PHOENIX METRO SATURDAY
MORNING/AFTERNOON. ACTIVITY WILL QUIET DOWN SATURDAY EVENING AS THE
UPPER LOW EXITS THE AREA.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

## &&

## .FIRE WEATHER...

## MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH EARLY SUNDAY...ALTHOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
357 AM PDT SAT SEP 27 2014

## .SYNOPSIS...

TEMPERATURES WILL BE BELOW NORMAL THROUGH SUNDAY AROUND THE REGION AS AN UPPER LEVEL TROUGH OF LOW PRESSURE PASSES BY JUST TO OUR NORTH. IT WILL ALSO BE WINDY THROUGH TONIGHT...BUT MAINLY OVER THE COASTAL WATERS AND IN THE MOUNTAINS AND DESERTS OF INTERIOR SOUTHERN CALIFORNIA. A FEW SHOWERS OR EVEN A THUNDERSTORM MAY OCCUR OVER THE SAN BERNARDINO COUNTY MOUNTAINS LATE THIS AFTERNOON THROUGH SUNDAY. THE WEATHER WILL TURN WARMER EARLY NEXT WEEK AS HIGH PRESSURE SLOWLY BUILDS OVER THE REGION...WITH SIGNIFICANTLY ABOVE NORMAL TEMPERATURES LIKELY TOWARDS THE END OF THE WORK WEEK.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

THE CLOSED UPPER LOW PRESSURE WAS CENTERED NEAR MODESTO EARLY THIS MORNING. THE UPPER LOW WILL MOVE EAST INTO NEVADA THROUGH TONIGHT. TWO SOMEWHAT STRONG SHORTWAVES WILL PASS OVER SOUTHERN CALIFORNIA THIS AFTERNOON AND EVENING AND A NARROW RIBBON OF LOW TO MID LEVEL MOISTURE WILL ACCOMPANY THESE FEATURES. WE'VE ADDED A SLIGHT CHANCE FOR SHOWERS AND T-STORMS FOR THIS AFTERNOON AND EVENING OVER THE SAN BERNARDINO MOUNTAINS WHERE THE BEST COMBINATION OF U/L FORCING AND NARROW MOISTURE BAND LOOK TO BE PRESENT. NOT A SIGNIFICANT THREAT OF THUNDERSTORMS AT THIS TIME BUT IT DOES LOOK WORTHY OF A SLIGHT CHANCE WITH THE NECESSARY INGREDIENTS COMING TOGETHER. YET ANOTHER S/W WILL PASS THROUGH THE AREA ON SUNDAY BUT NOT QUITE AS DECENT CONVECTIVE PARAMETERS SO WE CONTINUE TO MENTION A SLIGHT CHANCE OF SHOWERS IN THE SAN BERN MOUNTAINS AGAIN. THE SNOW LEVELS WILL BE AS LOW AS 8000 FEET SO A FEW SNOW SHOWERS COULD OCCUR IN THE HIGHER PEAKS OF THE SAN BERN MOUNTAINS GIVEN THE PROXIMITY TO THE COLDER AIR WHICH WILL BE OVER THE CENTRAL SIERRA.

THE ONSHORE PRESSURE GRADIENTS AND U/L JET WILL CONTINUE TO BRING STRONG AND GUSTY WEST WINDS TO THE RIVERSIDE AND SAN DIEGO COUNTY MOUNTAINS AND DESERTS THROUGH LATE TONIGHT. WIND GUSTS HAVE ALREADY REACHED AROUND 60 MPH IN OUR MOST WIND PRONE LOCATIONS SUCH AS BURNS CANYON RAWS NEAR THE EDGE OF THE SAN BERN MOUNTAINS AND DESERT AND WHITE WATER RAWS...BOTH OR WHICH ARE RATHER REMOTE LOCATIONS. LOWER WINDS THROUGH THE HEAVILY TRAVELED PASSES AND INTO THE DESERTS COULD CAUSE SOME IMPACT TO TRAVELERS AND KICK UP SOME DUST IN THE DESERT THROUGH TONIGHT...HENCE THE WIND ADVISORY WILL REMAIN IN PLACE FOR THOSE LOCATIONS.

# September 27, 2014, Exceptional Event, Imperial County

FOR TONIGHT THE MARINE LAYER SHOULD BUILD UP A BIT COMPARED TO THIS MORNING...WHICH IS ALMOST NON-EXISTENT. ALONG WITH STRONG ONSHORE FLOW WE EXPECT A DEEP PENETRATION OF COOL MARINE AIR BUT WITHOUT A STRONG INVERSION THE CLOUD COVER WILL BE SCATTERED TO BROKEN AT TIMES FROM THE COAST ALL THE WAY TO THE INTERIOR MOUNTAINS.

IEM :: AFD from NWS SGX

THE LARGE UPPER LOW AND TROUGH WILL FINALLY KICK EAST INTO UTAH BY MONDAY MORNING. RETURN HIGH PRESSURE WILL SLOWLY BUILD ACROSS SOUTHWEST CALIFRONIA THROUGH MIDWEEK. TEMPERATURES WILL MODERATE BACK TO NEAR NORMAL LEVELS WITH DECENT ONSHORE GRADIENTS CONTINUING AND BRINGING MINOR MARINE LAYER INTRUSIONS THROUGH THE COASTAL VALLEYS EACH MORNING.

FROM THURSDAY THROUGH SATURDAY...A GRADUALLY STRENGTHENING
OFFSHORE FLOW PATTERN WILL DEVELOP AS SURFACE HIGH PRES BUILDS
NEAR THE FOUR CORNERS REGION. ALTHOUGH WINDS DO NOT LOOK
PARTICULARLY STRONG AT THIS TIME...THE LONGEVITY OF THE EVENT WILL
BRING GRADUALLY LOWER RELATIVE HUMIDITY AND A BUILD OF
COMPRESSIONAL HEATING TOWARDS THE COAST EACH DAY WITH THE WARMEST
TEMPS EXPECTED BY NEXT SATURDAY...POSSIBLY 10 DEGREES ABOVE NORMAL
FROM THE COAST TO THE INTERIOR MOUNTAINS. MINIMUM RELATIVE
HUMIDITY VALUES MAY FALL INTO THE TEENS EACH DAY AS WELL.

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# .AVIATION...

270935Z...COASTS/VALLEYS...SCT-BKN STRATUS WITH BASES 2000-2500 FT MSL AND TOPS TO 3500 FT MSL WILL CONTINUE WEST OF THE MTNS THIS MORNING...BECOMING FEW-SCT BY 17Z. LOWER COASTAL SLOPES OF THE MTNS WILL BE OBSCURED IN CLOUDS/FOG AT TIMES. PATCHY STRATUS REDEVELOPING AROUND 28/00Z...BECOMING BKN-OVC AFTER 03Z WITH BASES 2500-3000 FT MSL.

MOUNTAINS/DESERTS...SOUTHWEST TO WEST WINDS WITH SURFACE GUSTS 35 TO 45 KT WILL CONTINUE OVER THE MOUNTAIN RIDGES...DESERT MOUNTAIN SLOPES...AND ADJACENT DESERT FOOTHILLS THROUGH LATE THIS EVENING. WINDS MAY WEAKEN FOR A TIME DURING THIS MORNING BEFORE STRENGTHENING AGAIN EARLY THIS AFTERNOON. MOD-STG UP/DOWNDRAFTS...LLWS...AND ROTOR ACTIVITY IS POSSIBLE OVER/EAST OF THE MOUNTAINS THROUGH THIS EVENING.

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## .MARINE...

300 AM...WEST-NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT WILL CONTINUE OVER THE OUTER COASTAL WATERS THROUGH LATE THIS EVENING...STRONGEST NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THROUGH 2 AM PDT SUNDAY FOR THE OUTER WATERS. NO HAZARDOUS MARINE WEATHER IS EXPECTED FOR THE REST OF SUNDAY THROUGH WEDNESDAY.

&&

SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY UNTIL 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY...
RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN
DIEGO COUNTY MOUNTAINS.

PZ...SMALL CRAFT ADVISORY FOR WINDS UNTIL 2 AM PDT SUNDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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PUBLIC...BROTHERTON AVIATION/MARINE...SS

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NWUS56 KSGX 271135

LSRSGX

PRELIMINARY LOCAL STORM REPORT NATIONAL WEATHER SERVICE SAN DIEGO CA 434 AM PDT SAT SEP 27 2014

...TIME... ...EVENT... ...CITY LOCATION... ...LAT.LON...
...DATE... ...MAG... ...COUNTY LOCATION..ST.. ...SOURCE....

..REMARKS..

0151 AM NON-TSTM WND GST 13 ESE BIG BEAR CITY 34.21N 116.62W

09/27/2014 M66 MPH SAN BERNARDINO CA MESONET

MESONET STATION BURNS CANYON /BCNC1/

0250 AM NON-TSTM WND GST 7 ENE CABAZON 33.95N 116.66W

09/27/2014 M59 MPH RIVERSIDE CA MESONET

MESONET STATION WHITEWATER RAWS /WWAC1/

0340 AM NON-TSTM WND GST 5 SSW INDIAN WELLS 33.65N 116.38W

09/27/2014 M50 MPH RIVERSIDE CA MESONET

MESONET STATION PALM DESERT (5 S) /UCDE/

0250 AM NON-TSTM WND GST 3 NNE CATHEDRAL CITY 33.87N 116.43W

09/27/2014 M49 MPH RIVERSIDE CA MESONET

MESONET STATION EDOM HILL (6 NE PSP) /SDEDO/

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NWS SAN DIEGO CA IRIS SYSTEM



# September 27, 2014, Exceptional Event, Imperial County

T 121 FXUS65 KPSR 271151 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
451 AM MST SAT SEP 27 2014

...SEVERE WEATHER THREAT OVER SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS ON SATURDAY...

#### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE THROUGH THE REGION TODAY. THIS STORM...COMBINED WITH AMPLE MONSOON MOISTURE...IS EXPECTED TO PRODUCE WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY ACROSS A LARGE PART OF ARIZONA. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY STRONG...EVEN DAMAGING WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST TO SPREAD ACROSS THE REGION FROM SUNDAY THROUGH THE MIDDLE OF NEXT WEEK.

&&

#### .DISCUSSION...

TODAY AND TONIGHT...

A MASSIVE COOL PACIFIC LOW PRESSURE SYSTEM CONTINUED TO MOVE TOWARD AZ EARLY THIS MORNING. INCREASED SOUTHWESTERLY AND DIFLUENT JETSTREAM WINDS CONTINUED TO DEVELOP WIDESPREAD CONVECTION AND HEAVY RAIN OVER NORTHWEST AZ OVERNIGHT...WEAKLY TRAILING INTO PARTS OF SOUTHWEST AZ AT 2 AM. INCREASING SHOWERS AND THUNDERSTORMS HAD ALSO DEVELOP IN PARTS OF EASTERN MARICOPA COUNTY AT THIS TIME.

CONVECTION WAS FEEDING OFF A DENSE LOW LEVEL SUBTROPICAL MOISTURE PLUME MOVING NORTH UP THE COLORADO RIVER VALLEY AND PARTS OF SOUTHWEST AZ AHEAD OF THE COLD FRONT. THANKS TO THE YUMA PROVING GROUNDS...MULTIPLE LATE FRIDAY AFTERNOON WEATHER BALLOONS WERE LAUNCHED DETECTING THIS MOISTURE PLUME...AND SHOWING MOISTURE LEVELS WERE EXCESSIVE BELOW 8 THSD FEET.

AS THE PACIFIC TROF SLOWLY ADVANCES TOWARD AZ THIS MORNING AND AFTERNOON...STRONG UPPER LEVEL DIFLUENT FLOW OVER THE RICH LOW LEVEL MOISTURE PLUME WILL GENERATE WIDESPREAD SHOWERS AND THUNDERSTORMS OVER PARTS OF SOUTHWEST AND SOUTH CENTRAL AZ TODAY...INCLUDING PHOENIX. AT 2 AM THE NEXT IN A SERIES OF SHORTWAVES...ROTATING AROUND THE BROADER WESTERN STATES LOW PRESSURE CIRCULATION...WAS ON THE DOORSTEP OF SAN DIEGO AND POISED TO ROTATE INTO AZ LATER THIS MORNING.

ADDITIONALLY...VERTICAL WIND SHEAR WILL ALSO COME INTO PLAY SUGGESTING THE POSSIBILITY OF ORGANIZED AND SEVERE AFTERNOON CONVECTION...REPLETE WITH STRONG SURFACE GUSTS AND LARGE HAIL. THE STORM PREDICTION CENTER...SPC...CONTINUES TO PUT NEARLY THE ENTIRE WESTERLY HALF OF AZ UNDER A SLIGHT RISK OF SEVERE WEATHER TODAY.

EARLIER FORECASTS WITH HIGH PRECIP PROBABILITIES AND THE THREAT FOR HEAVY RAIN OVER PARTS OF SOUTHWEST AND SOUTH CENTRAL ARIZONA WILL CONTINUE...SO VERY LITTLE FORECAST CHANGES WERE MADE ON THIS SHIFT.

FOR TONIGHT...UPPER LEVEL STORM DYNAMICS AND THE DEEP MOISTURE PLUME WILL SHIFT INTO EASTERN AZ THIS EVENING WITH THE COLD FRONT. THEREFORE PRECIP PROBABILITIES WILL TAPER OFF SIGNIFICANTLY OVER SOUTHWEST AND SOUTH CENTRAL AZ THIS EVENING...BUT CONTINUE OVER MOUNTAINOUS SOUTHERN GILA COUNTY THROUGH SUNDAY MORNING.

#### SUNDAY...

A MUCH DRIER AIRMASS WILL SPREAD ACROSS SOUTHEAST CA...SOUTHWEST AND SOUTH CENTRAL AZ SUNDAY. HOWEVER...DEEP MOISTURE WILL CONTINUE ALONG THE EASTERN AZ BORDER UNTIL SUNDAY NIGHT. A THREAT OF SHOWERS AND THUNDERSTORMS WILL LINGER OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY SUNDAY...DRY ELSEWHERE IN OUR FORECAST AREA.

MONDAY THROUGH WEDNESDAY...

DRY WEATHER WITH NEAR SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

&&

#### .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

SHOWERS AND THUNDERSTORMS THROUGH MID MORNING WILL BE ISOLATED AND MAINLY FOCUSED TO THE NORTH AND WEST OF THE PHOENIX AREA...POTENTIALLY AFFECTING KBLH. BY LATE MORNING INTO THE EARLY AFTERNOON...EXPECTING A LINE OF SHOWERS AND THUNDERSTORMS TO DEVELOP JUST TO THE WEST OF PHOENIX AND THEN MOVE THROUGH THE PHOENIX AREA WITH THE HIGHEST CONFIDENCE IN GETTING RAINFALL AT THE PHOENIX TERMINALS BETWEEN 20Z-00Z THIS AFTERNOON.

THUNDERSTORMS TODAY WILL HAVE THE POTENTIAL TO PRODUCE STRONG WINDS AND AM FAIRLY CONFIDENT THERE WILL BE A COUPLE HOUR PERIOD LATE THIS AFTERNOON WHEN THE PHOENIX TERMINALS WILL SEE WIND GUSTS APPROACHING 40 KNOTS AT TIMES. OUTSIDE OF SHOWERS AND THUNDERSTORMS...GRADIENT WINDS WILL ALSO BE GUSTY THIS AFTERNOON. ACTIVITY WILL QUIET DOWN BY EARLY EVENING AS THE UPPER LOW EXITS THE AREA.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

## .FIRE WEATHER...

MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE

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WWUS76 KSGX 271224

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 524 AM PDT SAT SEP 27 2014

...STRONG AND GUSTY WEST TO SOUTHWEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH LATE TONIGHT...

CAZ056-058-061-062-272130-

/O.CON.KSGX.WI.Y.0047.000000T0000Z-140928T1100Z/
RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINSCOACHELLA VALLEY-SAN DIEGO COUNTY DESERTS524 AM PDT SAT SEP 27 2014

- ...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 AM PDT SUNDAY...
- \* WIND SPEEDS...25 TO 35 MPH WITH GUSTS UP TO 55 MPH.
- \* TIMING...THROUGH EARLY SUNDAY MORNING.
- \* LOCATIONS...ALONG MOUNTAIN RIDGES...DESERT SLOPES...THROUGH AND BELOW CANYONS AND PASSES...AND INTO ADJACENT DESERT AREAS. IN THE COACHELLA VALLEY...THROUGH AND BELOW THE SAN GORGONIO PASS AND NORTH OF INTERSTATE 10. INTERSTATE 8 IN THE SAN DIEGO COUNTY MOUNTAINS AND DESERT WILL BE IMPACTED AS WELL.
- \* VISIBILITY...MAY BE REDUCED IN THE DESERT DUE TO BLOWING DUST.
- \* IMPACTS...THE WINDS MAY MAKE FOR DIFFICULT DRIVING CONDITIONS...ESPECIALLY FOR HIGH PROFILE VEHICLES. WATCH OUT FOR BROKEN TREE LIMBS. BLOWING DUST IN THE DESERT COULD ALSO MAKE FOR HAZARDOUS TRAVEL.
- \* OUTLOOK...WINDS WILL DIMINISH SUNDAY MORNING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A WIND ADVISORY MEANS THAT WINDS OF 35 MPH OR GUSTS OF 45 MPH OR GREATER ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

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JMB

787 FXUS65 KPSR 271611 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
910 AM MST SAT SEP 27 2014

...SEVERE WEATHER THREAT OVER MAINLY SOUTH-CENTRAL ARIZONA FROM LATE MORNING INTO THE EVENING HOURS TODAY...

#### .SYNOPSIS...

A STRONG PACIFIC STORM IS FORECAST TO MOVE THROUGH THE REGION TODAY. THIS STORM...COMBINED WITH AMPLE MONSOON MOISTURE...IS EXPECTED TO PRODUCE WIDESPREAD SHOWER AND THUNDERSTORM ACTIVITY ACROSS A LARGE PART OF ARIZONA. SOME OF THE STRONGER STORMS WILL BE CAPABLE OF PRODUCING LOCALLY STRONG...EVEN DAMAGING WINDS...HEAVY RAIN...AND HAIL. AFTER A COLD FRONTAL PASSAGE SATURDAY NIGHT...DRIER WEATHER WITH BELOW NORMAL TEMPERATURES ARE FORECAST TO SPREAD ACROSS THE REGION FROM SUNDAY THROUGH THE MIDDLE OF NEXT WEEK.

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#### .DISCUSSION...

AFTER AN EARLY MORNING ROUND OF SHOWERS AND THUNDERSTORMS...PHOENIX AREA HAS BEEN QUIET. STORM ACTIVITY HAS BEEN GREATER OVER LA PAZ AND YUMA COUNTIES NEAR THE ADVANCING COOL FRONT. NYL AND BLH METARS INDICATE THAT THE FRONT HAS PASSED THE LOWER COLORADO RIVER VALLEY...CHANGE IN WIND DIRECTION AND DROP IN DEW POINTS...AS OF THIS WRITING. HOWEVER...REPEAT STORMS CONTINUE OVER WESTERN PORTIONS OF LA PAZ COUNTY WHICH INDICATES DRIER AIR HAS NOT PUSHED VERY MUCH INTO LA PAZ COUNTY. THE AXIS OF THE ASSOCIATED UPPER TROUGH WAS ORIENTED NORTH-SOUTH OVER WA/OR/CA WITH THE MAIN CYCLONIC CIRCULATION CENTERED OVER CENTRAL CALIFORNIA. ONE VORT LOBE WITHIN THE CIRCULATION APPEARS TO HAVE SHIFTED INTO NEVADA WITH ANOTHER ONE ROUNDING THE BOTTOM OF THE TROUGH NEAR THE SOUTHWEST CALIFORNIA COAST. MODELS SHOW THE SOME QG FORCING FROM IT GETTING INTO SOUTHWEST ARIZONA THIS MORNING IN ADDITION TO SOME LIFT FROM THE FRONT. SOME UPPER LEVEL DIVERGENCE IS ADVERTISED OVER SOUTH-CENTRAL ARIZONA BY BOTH THE NAM AND GFS...NAM MORE GENEROUS. THE NEXT MAIN VORT MAX AND JET STREAK MOVE INTO SOUTHEAST CALIFORNIA AND SOUTHWEST ARIZONA BEGINNING THIS AFTERNOON WITH A DIVQ BULLSEYE MOVING EAST OF THE LOWER COLORADO RIVER VALLEY THIS EVENING. BEST QG FORCING LOOKS TO LAG BEHIND THE MOISTURE. HOWEVER...WITH ANOMALOUS PRECIPITABLE WATER AND AN APPROACHING UPPER TROUGH...THERE IS CAPE AND DYNAMICAL FORCING IN PLAY FOR OUR AREA TODAY AND THIS EVENING. THERE IS ALSO VERTICAL WIND SHEAR IN PLAY WITH EFFECTIVE SHEAR OF AT LEAST 30 KTS WHICH ENHANCES THE SEVERE POTENTIAL. NOT EVERY STORM WILL BE SEVERE THOUGH A GOOD PORTION OF THEM WILL BE CAPABLE OF SMALL HAIL...WIND GUSTS OF 35 TO 45 MPH...AND BRIEF HEAVY RAIN. KEY QUESTIONS ARE HOW NUMEROUS WILL THEY BE AND WHERE WILL THERE BE TRAINING OF ECHOES. WITH DEEP SOUTHERLY COMPONENT TO THE FLOW...TRAINING IS QUITE POSSIBLE. THUS THERE IS THE DUAL THREAT OF SEVERE AND FLASH

September 27, 2014, Exceptional Event, Imperial County FLOODING. HIGHER TERRAIN AREAS OF SOUTHERN GILA COUNTY AND FAR NORTHEAST MARICOPA COUNTY LOOK TO BE MOST SUSCEPTIBLE TO FLASH FLOODING BUT THAT IS NOT NECESSARILY THE ONLY PLACE IT CAN HAPPEN. FOR SOUTH-CENTRAL ARIZONA...ANTICIPATE ANTICIPATE AN UPSWING IN STORM DEVELOPMENT BEGINNING BY LATE MORNING/MIDDAY WITH AN ACTIVE PERIOD THIS AFTERNOON AND EVENING. MORE LATER.

&&

.PREVIOUS DISCUSSION ISSUED 230 AM...

TODAY AND TONIGHT...

A MASSIVE COOL PACIFIC LOW PRESSURE SYSTEM CONTINUED TO MOVE TOWARD AZ EARLY THIS MORNING. INCREASED SOUTHWESTERLY AND DIFLUENT

JETSTREAM WINDS CONTINUED TO DEVELOP WIDESPREAD CONVECTION AND HEAVY RAIN OVER NORTHWEST AZ OVERNIGHT...WEAKLY TRAILING INTO PARTS OF SOUTHWEST AZ AT 2 AM. INCREASING SHOWERS AND THUNDERSTORMS HAD ALSO DEVELOP IN PARTS OF EASTERN MARICOPA COUNTY AT THIS TIME.

CONVECTION WAS FEEDING OFF A DENSE LOW LEVEL SUBTROPICAL MOISTURE PLUME MOVING NORTH UP THE COLORADO RIVER VALLEY AND PARTS OF SOUTHWEST AZ AHEAD OF THE COLD FRONT. THANKS TO THE YUMA PROVING GROUNDS...MULTIPLE LATE FRIDAY AFTERNOON WEATHER BALLOONS WERE LAUNCHED DETECTING THIS MOISTURE PLUME...AND SHOWING MOISTURE LEVELS WERE EXCESSIVE BELOW 8 THSD FEET.

AS THE PACIFIC TROF SLOWLY ADVANCES TOWARD AZ THIS MORNING AND AFTERNOON...STRONG UPPER LEVEL DIFLUENT FLOW OVER THE RICH LOW LEVEL MOISTURE PLUME WILL GENERATE WIDESPREAD SHOWERS AND THUNDERSTORMS OVER PARTS OF SOUTHWEST AND SOUTH CENTRAL AZ TODAY...INCLUDING PHOENIX. AT 2 AM THE NEXT IN A SERIES OF SHORTWAVES...ROTATING AROUND THE BROADER WESTERN STATES LOW PRESSURE CIRCULATION...WAS ON THE DOORSTEP OF SAN DIEGO AND POISED TO ROTATE INTO AZ LATER THIS MORNING.

ADDITIONALLY...VERTICAL WIND SHEAR WILL ALSO COME INTO PLAY SUGGESTING THE POSSIBILITY OF ORGANIZED AND SEVERE AFTERNOON CONVECTION...REPLETE WITH STRONG SURFACE GUSTS AND LARGE HAIL. THE STORM PREDICTION CENTER...SPC...CONTINUES TO PUT NEARLY THE ENTIRE WESTERLY HALF OF AZ UNDER A SLIGHT RISK OF SEVERE WEATHER TODAY.

EARLIER FORECASTS WITH HIGH PRECIP PROBABILITIES AND THE THREAT FOR HEAVY RAIN OVER PARTS OF SOUTHWEST AND SOUTH CENTRAL ARIZONA WILL CONTINUE...SO VERY LITTLE FORECAST CHANGES WERE MADE ON THIS SHIFT.

FOR TONIGHT...UPPER LEVEL STORM DYNAMICS AND THE DEEP MOISTURE PLUME WILL SHIFT INTO EASTERN AZ THIS EVENING WITH THE COLD FRONT.

THEREFORE PRECIP PROBABILITIES WILL TAPER OFF SIGNIFICANTLY OVER
SOUTHWEST AND SOUTH CENTRAL AZ THIS EVENING...BUT CONTINUE OVER
MOUNTAINOUS SOUTHERN GILA COUNTY THROUGH SUNDAY MORNING.

#### SUNDAY...

A MUCH DRIER AIRMASS WILL SPREAD ACROSS SOUTHEAST CA...SOUTHWEST AND SOUTH CENTRAL AZ SUNDAY. HOWEVER...DEEP MOISTURE WILL CONTINUE ALONG THE EASTERN AZ BORDER UNTIL SUNDAY NIGHT. A THREAT OF SHOWERS AND

September 27, 2014, Exceptional Event, Imperial County THUNDERSTORMS WILL LINGER OVER THE MOUNTAINS OF SOUTHERN GILA COUNTY SUNDAY...DRY ELSEWHERE IN OUR FORECAST AREA.

MONDAY THROUGH WEDNESDAY...

DRY WEATHER WITH NEAR SEASONAL TEMPERATURES ARE EXPECTED ACROSS THE ENTIRE FORECAST AREA.

&&

.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

SHOWERS AND THUNDERSTORMS THROUGH MID MORNING WILL BE ISOLATED AND MAINLY FOCUSED TO THE NORTH AND WEST OF THE PHOENIX AREA...POTENTIALLY AFFECTING KBLH. BY LATE MORNING INTO THE EARLY AFTERNOON...EXPECTING A LINE OF SHOWERS AND THUNDERSTORMS TO DEVELOP JUST TO THE WEST OF PHOENIX AND THEN MOVE THROUGH THE PHOENIX AREA WITH THE HIGHEST CONFIDENCE IN GETTING RAINFALL AT THE PHOENIX TERMINALS BETWEEN 20Z-00Z THIS AFTERNOON.

THUNDERSTORMS TODAY WILL HAVE THE POTENTIAL TO PRODUCE STRONG WINDS AND AM FAIRLY CONFIDENT THERE WILL BE A COUPLE HOUR PERIOD LATE THIS AFTERNOON WHEN THE PHOENIX TERMINALS WILL SEE WIND GUSTS APPROACHING 40 KNOTS AT TIMES. OUTSIDE OF SHOWERS AND THUNDERSTORMS...GRADIENT WINDS WILL ALSO BE GUSTY THIS AFTERNOON. ACTIVITY WILL QUIET DOWN BY EARLY EVENING AS THE UPPER LOW EXITS THE AREA.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

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.FIRE WEATHER...

MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH EARLY SUNDAY...ALTHOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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# September 27, 2014, Exceptional Event, Imperial County

911 FXUS66 KSGX 271710 AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
1010 AM PDT SAT SEP 27 2014

#### .SYNOPSIS...

UNSEASONABLY COOL CONDITIONS WILL PREVAIL ACROSS SOUTHERN CALIFORNIA THROUGH SUNDAY...AS AN UPPER LEVEL LOW SLOWLY MOVES INLAND ACROSS CENTRAL CALIFORNIA. WINDY CONDITIONS WILL CONTINUE ACROSS THE MOUNTAINS AND DESERTS...WITH SOME BLOWING DUST POSSIBLE. A DEEP MARINE LAYER WILL LINGER WEST OF THE MOUNTAINS...WITH MOSTLY CLEAR TO PARTLY CLOUDY SKIES PREVAILING. THERE MAY EVEN BE ENOUGH INSTABILITY FOR A STRAY SHOWER OR THUNDERSTORM OVER THE SAN BERNARDINO MOUNTAINS THROUGH SUNDAY. HIGH PRESSURE WILL THEN SLOWLY REBUILD ACROSS THE REGION...WITH DRY AND WARMER CONDITIONS REDEVELOPING. SOME OFFSHORE WINDS MAY ENHANCE THESE WARM AND DRY CONDITIONS FOR FRIDAY AND NEXT WEEKEND.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

WATER VAPOR IMAGERY SHOWS AN IMPRESSIVE UPPER LEVEL LOW CENTERED OVER THE SAN JOAQUIN VALLEY THIS MORNING...WITH THE ASSOCIATED LINE OF THUNDERSTORMS PUSHING EAST INTO UTAH AND ARIZONA THIS MORNING. THAT BEING SAID...DRY CONDITIONS CONTINUE ACROSS SOUTHERN CALIFORNIA...WITH JUST A RELATIVELY PATCHY STRATUS CLOUDS WEST OF THE MOUNTAINS. THE MORNING KNKX SOUNDING SHOWS THE MARINE LAYER AROUND 2500 FEET...BUT THINK IT HAS DEEPENED EVEN MORE GIVEN CURRENT CLOUD BASES. THE SOUNDING ALSO SHOWS A VERY DRY AND STABLE PROFILE ACROSS THE AREA...WITH UP TO 8 DEGREES OF COOLING NEAR THE SURFACE. THEREFORE...EXPECT A MUCH COOLER DAY ACROSS THE SOUTHLAND TODAY...WITH INLAND TEMPERATURES RUNNING 5 TO 15 DEGREES BELOW NORMAL. ALTHOUGH THE SOUNDING IS EXTREMELY DRY ABOVE 900 MBS AND THE PWS ARE ONLY 0.51 INCHES...THE MODELS ARE HINTING AT SOME MID LEVEL INSTABILITY OVER THE SAN BERNARDINO MOUNTAINS LATER THIS AFTERNOON AND EVENING...AS A DISTURBANCE MOVES AROUND THIS UPPER LEVEL LOW MOVES AND OVER THE AREA. THE MODELS ARE ALSO HINTING AT SOME MIDLEVEL MOISTURE...BUT THINK THAT THEY ARE TAPPING THE MARINE LAYER MOISTURE. FOR THIS REASON...DO NOT THINK THAT THERE IS A MUCH OF A CHANCE OF SHOWERS OR THUNDERSTORMS DEVELOPING OVER THE SAN BERNARDINO MOUNTAINS THIS AFTERNOON...BUT CANNOT RULE OUT A STRAY SHOWER OR TWO. THE MAIN WEATHER CONCERN TODAY WILL BE WITH THE GUSTY WINDS IN THE MOUNTAINS AND DESERTS. AT THIS TIME...THE MODELS ARE SHOWING THE ONSHORE GRADIENTS INCREASING TO NEARLY 6 MBS AGAIN THIS AFTERNOON...WITH THE 850 MB WIND SUPPORT OF 30 TO 40 KTS. FOR THIS REASON...THINK THE WIND ADVISORY LOOKS ON TRACK FOR THIS AFTERNOON AND EVENING...EVEN IF THE WINDS ARE IN A BIT OF A LULL

September 27, 2014, Exceptional Event, Imperial County RIGHT NOW. THESE COOL CONDITIONS WILL CONTINUE INTO SUNDAY...AS THIS UPPER LEVEL LOW SLOWLY MOVES EAST.

HIGH PRESSURE WILL THEN GRADUALLY BUILD BACK ACROSS CALIFORNIA DURING THE WORK WEEK...WITH WARMER AND DRIER CONDITIONS DEVELOPING. IN FACT...MODELS SHOW A STEADY INCREASE IN 850 MB TEMPERATURES THROUGH NEXT SATURDAY...SO EXPECT TEMPERATURES TO GO FROM 5 TO 15 DEGREES BELOW NORMAL THIS WEEKEND TO 5 TO 15 DEGREES ABOVE NORMAL BY FRIDAY. THIS WARMING WILL ALSO AFFECT THE COASTAL AREAS...AS THE MARINE LAYER WILL LIKELY BECOME VERY SHALLOW AND PATCHY DURING THIS TIME...AND POTENTIALLY MIX OUT BY THE END OF THE WORK WEEK. THE MODELS ARE ALSO HINTING AT SOME OFFSHORE WIND EVENT FOR THURSDAY THROUGH THE FOLLOWING WEEKEND...WHICH COULD ENHANCE THE WARMER AND DRIER CONDITIONS AS WELL.

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#### .AVIATION...

271530Z...COASTS/VALLEYS...PATCHY STRATUS...WITH BASES FROM
2900-3400 FT MSL AND TOPS TO 3700 FT MSL...WILL CONTINUE OVER INLAND
VALLEYS AND ALONG SAN DIEGO COUNTY COAST THROUGH EARLY AFTERNOON.
LOW CLOUDS WILL OBSCURE LOWER MOUNTAIN PEAKS AT TIMES.
STRATUS...WITH SIMILAR TOPS AND BASES...WILL REDEVELOP WEST OF THE
MOUNTAINS TONIGHT...LOWERING VISIBILITY WHERE CLOUDS NEAR HIGHER
TERRAIN.

MOUNTAINS/DESERTS...SOUTHWESTERLY WIND GUSTS TO 45 KT WILL CONTINUE OVER THE MOUNTAIN RIDGES...DESERT MOUNTAIN SLOPES...AND ADJACENT DESERT FOOTHILLS THROUGH LATE THIS EVENING. UP/DOWNDRAFTS... LLWS...AND ROTOR ACTIVITY IS POSSIBLE OVER/EAST OF THE MOUNTAINS THROUGH THIS EVENING. VISIBILITY WILL LOWER TO AROUND 4 SM AT TIMES DUE TO BLOWING DUST.

## &&

### .MARINE...

830 AM...WEST-NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT WILL CONTINUE OVER THE OUTER COASTAL WATERS THROUGH LATE THIS EVENING...WITH STRONGEST GUSTS OCCURRING NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THROUGH 2 AM PDT SUNDAY FOR THE OUTER WATERS. OTHERWISE...NO HAZARDOUS MARINE WEATHER IS EXPECTED LATE SUNDAY MORNING THROUGH WEDNESDAY.

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### .SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

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.SGX WATCHES/WARNINGS/ADVISORIES...

CA...WIND ADVISORY UNTIL 4 AM PDT SUNDAY FOR THE COACHELLA VALLEY...
RIVERSIDE COUNTY MOUNTAINS...SAN DIEGO COUNTY DESERTS...SAN

PZ...SMALL CRAFT ADVISORY FOR WINDS UNTIL 2 AM PDT SUNDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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PUBLIC...PALMER
AVIATION/MARINE...JJT

# IOWA STATE UNIVERSITY

College of Ag

Department of Agronomy

# **Department of Agronomy**

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September 27, 2014, Exceptional Event, Imperial County
                                                                                   Appendix A
855
WWUS85 KPSR 271849
SPSPSR
SPECIAL WEATHER STATEMENT
NATIONAL WEATHER SERVICE PHOENIX AZ
1149 AM MST SAT SEP 27 2014
AZZ026-271930-
YUMA AZ-
1149 AM MST SAT SEP 27 2014
...SIGNIFICANT WEATHER ADVISORY...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS ISSUED A
SIGNIFICANT WEATHER ADVISORY FOR...
  EAST CENTRAL YUMA COUNTY IN SOUTHWEST ARIZONA
UNTIL 1230 PM MST
AT 1147 AM MST...NATIONAL WEATHER SERVICE METEOROLOGISTS DETECTED A
STRONG THUNDERSTORM 5 MILES SOUTHEAST OF MOHAWK...MOVING NORTHEAST AT
25 MPH.
WIND GUSTS UP TO 40 MPH ARE EXPECTED WITH THIS STORM...ALONG WITH
HEAVY RAIN. TRAVELERS ALONG I-8 NEAR DATELAND SHOULD USE CAUTION.
LOCATIONS IMPACTED INCLUDE...
   MOHAWK...
   DATELAND...
   PALOMA...
LAT...LON 3302 11379 3302 11350 3296 11335 3266 11335
      3252 11353 3259 11387
TIME...MOT...LOC 1849Z 203DEG 23KT 3267 11368
$$
18
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FXUS66 KSGX 272015 AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
115 PM PDT SAT SEP 27 2014

#### .SYNOPSIS...

UNSEASONABLY COOL CONDITIONS WILL PREVAIL ACROSS SOUTHERN CALIFORNIA THROUGH SUNDAY...AS AN UPPER LEVEL LOW SLOWLY MOVES INLAND ACROSS CENTRAL CALIFORNIA. WINDY CONDITIONS WILL CONTINUE ACROSS THE MOUNTAINS AND DESERTS...WITH SOME BLOWING DUST POSSIBLE. A DEEP MARINE LAYER WILL LINGER WEST OF THE MOUNTAINS...WITH MOSTLY CLEAR TO PARTLY CLOUDY SKIES PREVAILING. HIGH PRESSURE WILL THEN SLOWLY REBUILD ACROSS THE REGION...WITH DRY AND WARMER CONDITIONS REDEVELOPING. SOME OFFSHORE WINDS MAY ENHANCE THESE WARM AND DRY CONDITIONS FOR THURSDAY THROUGH NEXT WEEKEND.

#### &&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

WATER VAPOR IMAGERY CONTINUES TO SHOW AN IMPRESSIVE UPPER LEVEL LOW CENTERED OVER THE SAN JOAQUIN VALLEY THIS AFTERNOON. ALTHOUGH THE ASSOCIATED AND RATHER IMPRESSIVE BAND OF THUNDERSTORMS CONTINUES TO PUSH EAST ACROSS UTAH AND ARIZONA THIS AFTERNOON...PRODUCING WIDESPREAD FLOODING...SOUTHERN CALIFORNIA REMAINS DRY AND STABLE. IN FACT...OUR ONLY CLOUD COVER SEEMS TO BE SOME LINGERING STRATUS CLOUDS ALONG AND WEST OF THE MOUNTAINS...WITH THE BRUNT OF THESE CLOUDS BANKING UP AGAINST THE SAN BERNARDINO AND SANTA ANA MOUNTAINS. THE MAIN IMPACTS OF THIS UPPER LEVEL LOW ACROSS THE SOUTHLAND ARE THE COOLER TEMPERATURES AND THE GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS. AT THIS TIME...TEMPERATURES ARE RUNNING UP TO 5 DEGREES COOLER ALONG THE COAST AND UPWARDS OF 14 DEGREES COOLER ACROSS THE INLAND AREAS. IN FACT...BIG BEAR IS STRUGGLING TO GET INTO THE MID 50S...WITH A HIGH OF 54 DEGREES SO FAR TODAY. MEANWHILE...COASTAL AND VALLEY LOCATIONS ARE ONLY IN THE 70S...MAKING IT REALLY FEEL LIKE FALL. THIS WILL MAKE FOR A VERY PLEASANT EVENING...WITH OVERNIGHT LOW TEMPERATURES FEELING KIND OF CHILLY FOR SOUTHERN CALIFORNIA. THESE UNSEASONABLY COOL CONDITIONS WILL CONTINUE THROUGH SUNDAY AS WELL...AS THE UPPER LEVEL LOW SLOWLY SHIFTS INLAND...WITH ONLY MINOR FLUCTUATIONS POSSIBLE.

THE ONSHORE SURFACE GRADIENTS ARE ONCE AGAIN ON THE RISE THIS AFTERNOON...RUNNING ABOUT SIMILAR TO OR SLIGHTLY STRONGER THAN THOSE OF YESTERDAY. AT THIS TIME...MOST OF THE LOCATIONS ACROSS THE MOUNTAINS AND DESERTS ARE GUSTING BETWEEN 30 AND 40 MPH...WITH THE WINDIEST LOCATIONS GUSTING TO AROUND 50 MPH. THESE WINDS WILL CONTINUE TO INCREASE THROUGH THIS EVENING...AS THE ONSHORE GRADIENTS AND THE UPPER LEVEL SUPPORT PEAK BETWEEN 00Z AND 06Z. ALTHOUGH THE

September 27, 2014, Exceptional Event, Imperial County WINDS WILL DECREASE LATE TONIGHT...GUSTY WEST WINDS WILL CONTINUE ACROSS THESE AREAS ON SUNDAY. THE ONSHORE GRADIENTS AND UPPER LEVEL SUPPORT WILL BE A LITTLE WEAKER THOUGH. THEREFORE...THE WIND ADVISORY LOOKS ON TRACK FOR NOW...WITH JUST A SECONDARY MINOR PEAK AGAIN ON SUNDAY AFTERNOON AND EVENING.

HIGH PRESSURE WILL THEN GRADUALLY BUILD BACK ACROSS CALIFORNIA DURING THE WORK WEEK...WITH WARMER AND DRIER CONDITIONS DEVELOPING. IN FACT...MODELS SHOW A STEADY INCREASE IN 850 MB TEMPERATURES THROUGH NEXT SATURDAY...SO EXPECT TEMPERATURES TO GO FROM 5 TO 15 DEGREES BELOW NORMAL THIS WEEKEND TO 5 TO 15 DEGREES ABOVE NORMAL BY FRIDAY. THIS WARMING WILL ALSO AFFECT THE COASTAL AREAS...AS THE MARINE LAYER WILL LIKELY BECOME VERY SHALLOW DURING THIS TIME...AND

POTENTIALLY MIX OUT BY THE END OF THE WORK WEEK. THE MODELS ARE ALSO HINTING AT SOME OFFSHORE WIND EVENT FOR THURSDAY THROUGH THE FOLLOWING WEEKEND...WHICH COULD ENHANCE THE WARMER AND DRIER CONDITIONS AS WELL.

&&

#### .AVIATION...

272000Z...COASTS/VALLEYS...FEW/SCT LOW CLOUDS...WITH BASES FROM 3000-3400 FT MSL AND TOPS TO 3800 FT MSL...WILL CONTINUE OVER AREAS WEST OF THE MOUNTAINS TODAY. STRATUS...WITH SIMILAR TOPS AND BASES...WILL REDEVELOP WEST OF THE MOUNTAINS TONIGHT...LOWERING VISIBILITY WHERE CLOUDS NEAR HIGHER TERRAIN. LOW CLOUDS WILL OBSCURE LOWER MOUNTAIN PEAKS AT TIMES. STRATUS WILL SLOWLY CLEAR TO FEW/SCT BY LATE SUNDAY MORNING.

MOUNTAINS/DESERTS...SOUTHWESTERLY WIND GUSTS TO 45 KT WILL CONTINUE OVER THE MOUNTAIN RIDGES...DESERT MOUNTAIN SLOPES...AND ADJACENT DESERT FOOTHILLS THROUGH LATE THIS EVENING. UP/DOWNDRAFTS... LLWS...AND ROTOR ACTIVITY IS POSSIBLE OVER/EAST OF THE MOUNTAINS THROUGH THIS EVENING. VISIBILITY WILL LOWER TO AROUND 4 SM AT TIMES DUE TO BLOWING DUST.

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# .MARINE...

100 PM...WEST-NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT WILL CONTINUE OVER THE OUTER COASTAL WATERS THROUGH LATE THIS EVENING...WITH STRONGEST GUSTS OCCURRING NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THROUGH 2 AM PDT SUNDAY FOR THE OUTER WATERS. OTHERWISE...NO HAZARDOUS MARINE WEATHER IS EXPECTED LATE SUNDAY MORNING THROUGH WEDNESDAY.

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#### .SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

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per 27, 2014, Exception	al Event, Imperial Cou	from NWS SGX Inty
/WARNINGS/ADVISORIES.	• •	
OUNTY MOUNTAINS.		
RAFT ADVISORY FOR WIN	DS UNTIL 2 AM PDT SL	JNDAY FOR THE
FROM SAN MATEO POINT	TO THE MEXICAN BORDE	R EXTENDING
0 NM OUT INCLUDING SA	N CLEMENTE ISLAND.	
MFR		
	VISORY UNTIL 4 AM PDT DE COUNTY MOUNTAINS DUNTY MOUNTAINS.  RAFT ADVISORY FOR WIN FROM SAN MATEO POINT NM OUT INCLUDING SA	Der 27, 2014, Exceptional Event, Imperial Cou/WARNINGS/ADVISORIES VISORY UNTIL 4 AM PDT SUNDAY FOR THE COAC DE COUNTY MOUNTAINSSAN DIEGO COUNTY DE DUNTY MOUNTAINS.  RAFT ADVISORY FOR WINDS UNTIL 2 AM PDT SU FROM SAN MATEO POINT TO THE MEXICAN BORDE DO NM OUT INCLUDING SAN CLEMENTE ISLAND.

# **IOWA STATE UNIVERSITY**

College of Ag

Department of Agronomy

# **Department of Agronomy**

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209

WWUS76 KSGX 272025

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 125 PM PDT SAT SEP 27 2014

...STRONG AND GUSTY WEST WINDS IN THE MOUNTAINS AND DESERTS OF RIVERSIDE AND SAN DIEGO COUNTIES THROUGH LATE TONIGHT...

.STRONG ONSHORE GRADIENTS AND GUSTY WEST TO SOUTHWEST WINDS WILL CONTINUE ACROSS SOUTHERN CALIFORNIA THROUGH TONIGHT...AS AN UPPER LEVEL LOW SLOWLY SHIFTS INLAND ACROSS THE STATE THROUGH SUNDAY.

CAZ056-058-061-062-280500-

/O.CON.KSGX.WI.Y.0047.000000T0000Z-140928T1100Z/
RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINSCOACHELLA VALLEY-SAN DIEGO COUNTY DESERTS125 PM PDT SAT SEP 27 2014

- ...WIND ADVISORY REMAINS IN EFFECT UNTIL 4 AM PDT SUNDAY...
- \* WIND SPEEDS...WEST WINDS 15 TO 30 MPH...WITH GUSTS UP TO 50 MPH. LOCAL GUSTS UP TO 60 MPH THROUGH THE FAVORED MOUNTAIN CANYONS AND PASSES.
- \* TIMING...THROUGH EARLY SUNDAY MORNING.
- \* LOCATIONS...ALONG MOUNTAIN RIDGES...DESERT SLOPES...THROUGH
  AND BELOW CANYONS AND PASSES...AND INTO ADJACENT DESERT AREAS.
  IN THE COACHELLA VALLEY...THROUGH AND BELOW THE SAN GORGONIO
  PASS AND NORTH OF INTERSTATE 10. INTERSTATE 8 IN THE SAN DIEGO
  COUNTY MOUNTAINS AND DESERT WILL BE IMPACTED AS WELL.
- \* VISIBILITY...MAY BE REDUCED IN THE DESERT DUE TO BLOWING DUST.
- \* IMPACTS...THE WINDS MAY MAKE FOR DIFFICULT DRIVING CONDITIONS...ESPECIALLY FOR HIGH PROFILE VEHICLES. WATCH OUT FOR BROKEN TREE LIMBS. BLOWING DUST IN THE DESERT COULD ALSO MAKE FOR HAZARDOUS TRAVEL.
- \* OUTLOOK...ALTHOUGH THESE WEST WINDS WILL WEAKEN LATE TONIGHT...A SECONDARY...BUT WEAKER PEAK WILL BE POSSIBLE SUNDAY AFTERNOON AND EVENING.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A WIND ADVISORY MEANS THAT WINDS OF 35 MPH OR GUSTS OF 45 MPH OR GREATER ARE EXPECTED. WINDS THIS STRONG CAN MAKE DRIVING DIFFICULT...ESPECIALLY FOR HIGH PROFILE VEHICLES. USE EXTRA CAUTION.

9/17/2018

September 27, 2014, Exceptional Event, Imperial County

024
FXUS65 KPSR 272141
AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
240 PM MST SAT SEP 27 2014

...SEVERE WEATHER THREAT CONTINUES OVER SOUTH-CENTRAL ARIZONA THIS AFTERNOON INTO THE EVENING HOURS TODAY...

#### .SYNOPSIS...

A STRONG PACIFIC STORM WILL LEAD TO NUMEROUS SHOWERS AND THUNDERSTORMS OVER SOUTH-CENTRAL ARIZONA THE REST OF THIS AFTERNOON AND EVENING BEFORE TRENDING DOWN OVERNIGHT. VERY STRONG WINDS AND HAIL CAN BE EXPECTED WITH THE STRONGEST STORMS ALONG WITH LOCALLY HEAVY RAIN. THERE WILL BE A LINGERING CHANCE OF SHOWERS AND THUNDERSTORMS SUNDAY...MAINLY OVER THE HIGHER TERRAIN. DRY CONDITIONS WITH A SLOW WARMING TREND CAN BE EXPECTED NEXT WEEK.

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#### .DISCUSSION...

REST OF TODAY AND TONIGHT...

SATELLITE AND RADAR DATA SHOW A NORTH-SOUTH ORIENTED CORRIDOR OF PRECIPITATION OVER THE CENTRAL THIRD OF ARIZONA EARLY THIS AFTERNOON. THE CORRIDOR IS ALONG AND EAST OF A COOL FRONT MOVING ACROSS THE STATE. MIXED LAYER CAPE OF 1000+ ALONG WITH DEEP LAYER SHEAR OF 30-40 KTS HAS LEAD TO VERY STRONG STORMS WHICH HAVE MERITED SEVERE THUNDERSTORM WARNINGS FOR HAIL AND WIND. LOW LEVEL SHEAR NOT LOOKING QUITE STRONG ENOUGH OVER OUR AREA TO BE READILY CONDUCIVE TO TORNADO FORMATION THOUGH IT CANT BE RULED OUT. THE STORMS ARE ALSO PRODUCING BRIEF BUT VERY HEAVY RAIN NECESSITATING ADVISORIES. THE CORRIDOR WILL CONTINUE TO MOVE EASTWARD THROUGH THE AFTERNOON WITH MUCH OF THE PHOENIX METRO SEEING A GOOD ROUND OF SHOWERS/THUNDERSTORMS. DYNAMICAL FORCING ASSOCIATED WITH THE UPPER TROUGH CENTERED OVER CALIFORNIA AND NEVADA WILL ALSO AID IN THE LIFT. BEST QG FORCING WILL BE FROM A JET/VORT MAX MOVING THROUGH THIS EVENING THOUGH IT WILL BE LAGGING BEHIND THE DEEPER MOISTURE AS DRIER AIR ADVECTION IS OCCURRING BEHIND THE FRONT. A SEVERE THUNDERSTORM WATCH REMAINS IN EFFECT FOR MARICOPA...PINAL...AND GILA COUNTIES UNTIL 6 PM. SHOWERS/THUNDERSTORMS WILL LIKELY CONTINUE TONIGHT OVER PORTIONS OF SOUTH-CENTRAL ARIZONA BUT INSTABILITY WILL BE TRENDING DOWN AND THUS THE SEVERE THREAT WILL BE TRENDING DOWN AS WELL. AS ALLUDED TO ABOVE...THERE WILL BE LOCALLY HEAVY RAIN. THERE MAY BE ENOUGH RAIN IN SPOTS TO CAUSE FLASH FLOODING IF REPEAT CELLS OCCUR...ESPECIALLY OVER HIGHER TERRAIN AND FOOTHILLS LOCATIONS. THINKING THE POTENTIAL IS LOCALIZED ENOUGH TO HOLD OFF ON ISSUING A FLASH FLOOD WATCH TO FOCUS ON THE SEVERE THREAT.

SUNDAY...

MOISTURE WILL CONTINUE TO TREND DOWNWARD FROM WEST TO EAST SUNDAY WITH ONLY A LINGERING SLIGHT CHANCE OVER SOUTH-CENTRAL

September 27, 2014, Exceptional Event, Imperial County ARIZONA...MAINLY EAST OF METRO PHOENIX. ANTICIPATE SOME ADDITIONAL COOLING MAINLY SOUTH-CENTRAL ARIZONA...BELOW NORMAL.

MONDAY THROUGH SATURDAY...

A DRY WEATHER REGIME TAKES HOLD NEXT WEEK AS NORTHWESTERLY FLOW ALOFT TRANSITIONS TO A RIDGE BECOMING CENTERED OVER OUR AREA BY NEXT WEEKEND. IN THE PROCESS...TEMPERATURES SLOWLY CLIMB BACK A BIT ABOVE NORMAL.

&&

.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

SHOWERS AND THUNDERSTORMS THROUGH MID MORNING WILL BE ISOLATED AND MAINLY FOCUSED TO THE NORTH AND WEST OF THE PHOENIX AREA...POTENTIALLY AFFECTING KBLH. BY LATE MORNING INTO THE EARLY AFTERNOON...EXPECTING A LINE OF SHOWERS AND THUNDERSTORMS TO DEVELOP JUST TO THE WEST OF PHOENIX AND THEN MOVE THROUGH THE PHOENIX AREA WITH THE HIGHEST CONFIDENCE IN GETTING RAINFALL AT THE PHOENIX TERMINALS BETWEEN 20Z-00Z THIS AFTERNOON.

THUNDERSTORMS TODAY WILL HAVE THE POTENTIAL TO PRODUCE STRONG WINDS AND AM FAIRLY CONFIDENT THERE WILL BE A COUPLE HOUR PERIOD LATE THIS AFTERNOON WHEN THE PHOENIX TERMINALS WILL SEE WIND GUSTS APPROACHING 40 KNOTS AT TIMES. OUTSIDE OF SHOWERS AND THUNDERSTORMS...GRADIENT WINDS WILL ALSO BE GUSTY THIS AFTERNOON. ACTIVITY WILL QUIET DOWN BY EARLY EVENING AS THE UPPER LOW EXITS THE AREA.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH EARLY SUNDAY...ALTHOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

&&

\$\$

VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...AJ
AVIATION...KUHLMAN
FIRE WEATHER...MEYERS/MCLANE

September 27, 2014, Exceptional Event, Imperial County

FXUS65 KPSR 272200 CCA AFDPSR

AREA FORECAST DISCUSSION...CORRECTED NATIONAL WEATHER SERVICE PHOENIX AZ 240 PM MST SAT SEP 27 2014

CORRECTED WWA SECTION

...SEVERE WEATHER THREAT CONTINUES OVER SOUTH-CENTRAL ARIZONA THIS AFTERNOON INTO THE EVENING HOURS TODAY...

## .SYNOPSIS...

A STRONG PACIFIC STORM WILL LEAD TO NUMEROUS SHOWERS AND THUNDERSTORMS OVER SOUTH-CENTRAL ARIZONA THE REST OF THIS AFTERNOON AND EVENING BEFORE TRENDING DOWN OVERNIGHT. VERY STRONG WINDS AND HAIL CAN BE EXPECTED WITH THE STRONGEST STORMS ALONG WITH LOCALLY HEAVY RAIN. THERE WILL BE A LINGERING CHANCE OF SHOWERS AND THUNDERSTORMS SUNDAY...MAINLY OVER THE HIGHER TERRAIN. DRY CONDITIONS WITH A SLOW WARMING TREND CAN BE EXPECTED NEXT WEEK.

&&

### .DISCUSSION...

REST OF TODAY AND TONIGHT...

SATELLITE AND RADAR DATA SHOW A NORTH-SOUTH ORIENTED CORRIDOR OF PRECIPITATION OVER THE CENTRAL THIRD OF ARIZONA EARLY THIS AFTERNOON. THE CORRIDOR IS ALONG AND EAST OF A COOL FRONT MOVING ACROSS THE STATE. MIXED LAYER CAPE OF 1000+ ALONG WITH DEEP LAYER SHEAR OF 30-40 KTS HAS LEAD TO VERY STRONG STORMS WHICH HAVE MERITED SEVERE THUNDERSTORM WARNINGS FOR HAIL AND WIND. LOW LEVEL SHEAR NOT LOOKING QUITE STRONG ENOUGH OVER OUR AREA TO BE READILY CONDUCIVE TO TORNADO FORMATION THOUGH IT CANT BE RULED OUT. THE STORMS ARE ALSO PRODUCING BRIEF BUT VERY HEAVY RAIN NECESSITATING ADVISORIES. THE CORRIDOR WILL CONTINUE TO MOVE EASTWARD THROUGH THE AFTERNOON WITH MUCH OF THE PHOENIX METRO SEEING A GOOD ROUND OF SHOWERS/THUNDERSTORMS. DYNAMICAL FORCING ASSOCIATED WITH THE UPPER TROUGH CENTERED OVER CALIFORNIA AND NEVADA WILL ALSO AID IN THE LIFT. BEST QG FORCING WILL BE FROM A JET/VORT MAX MOVING THROUGH THIS EVENING THOUGH IT WILL BE LAGGING BEHIND THE DEEPER MOISTURE AS DRIER AIR ADVECTION IS OCCURRING BEHIND THE FRONT. A SEVERE THUNDERSTORM WATCH REMAINS IN EFFECT FOR MARICOPA...PINAL...AND GILA COUNTIES UNTIL 6 PM. SHOWERS/THUNDERSTORMS WILL LIKELY CONTINUE TONIGHT OVER PORTIONS OF SOUTH-CENTRAL ARIZONA BUT INSTABILITY WILL BE TRENDING DOWN AND THUS THE SEVERE THREAT WILL BE TRENDING DOWN AS WELL. AS ALLUDED TO ABOVE...THERE WILL BE LOCALLY HEAVY RAIN. THERE MAY BE ENOUGH RAIN IN SPOTS TO CAUSE FLASH FLOODING IF REPEAT CELLS OCCUR...ESPECIALLY OVER HIGHER TERRAIN AND FOOTHILLS LOCATIONS. THINKING THE POTENTIAL IS LOCALIZED ENOUGH TO HOLD OFF ON ISSUING A FLASH FLOOD WATCH TO FOCUS ON THE SEVERE THREAT.

SUNDAY...

Appendix A

September 27, 2014, Exceptional Event, Imperial County
MOISTURE WILL CONTINUE TO TREND DOWNWARD FROM WEST TO EAST SUNDAY
WITH ONLY A LINGERING SLIGHT CHANCE OVER SOUTH-CENTRAL
ARIZONA...MAINLY EAST OF METRO PHOENIX. ANTICIPATE SOME ADDITIONAL
COOLING MAINLY SOUTH-CENTRAL ARIZONA...BELOW NORMAL.

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&&

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AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

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.FIRE WEATHER...

MONDAY THROUGH FRIDAY...

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&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...SEVERE THUNDERSTORM WATCH UNTIL 6 PM MST AZZ022>024...AZZ028.

September 27, 2014, Exceptional Event, Imperial County  CANONE.	Appendix A
&&	
<b>\$\$</b>	
VISIT US ON FACEBOOKTWITTERAND AT WEATHER.GOV/PHOENIX	
DISCUSSIONAJ	
AVIATIONKUHLMAN FIRE WEATHERMEYERS/MCLANE	

# **IOWA STATE UNIVERSITY**

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7 246 FXUS65 KPSR 280352 AFDPSR

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
850 PM MST SAT SEP 27 2014

...SEVERE WEATHER THREAT DIMINISHING ACROSS THE CENTRAL DESERTS EARLY THIS EVENING...

#### .SYNOPSIS...

A STRONG PACIFIC STORM WILL LEAD TO NUMEROUS SHOWERS AND THUNDERSTORMS OVER SOUTH-CENTRAL ARIZONA THE REST OF THIS AFTERNOON AND EVENING BEFORE TRENDING DOWN OVERNIGHT. VERY STRONG WINDS AND HAIL CAN BE EXPECTED WITH THE STRONGEST STORMS ALONG WITH LOCALLY HEAVY RAIN. THERE WILL BE A LINGERING CHANCE OF SHOWERS AND THUNDERSTORMS SUNDAY...MAINLY OVER THE HIGHER TERRAIN. DRY CONDITIONS WITH A SLOW WARMING TREND CAN BE EXPECTED NEXT WEEK.

&&

#### .DISCUSSION...

EARLIER IN THE AFTERNOON...VERY POTENT COLD FRONT/SQUALL LINE PUSHED EAST ACROSS SOUTH CENTRAL ARIZONA...AND THE EFFECTS OF THE SQUALL LINE HIT THE GREATER PHOENIX AREA HEAD ON. RADAR DEPICTED MULTIPLE SEVERE WEATHER SIGNATURES INCLUDING REAR INFLOW JETS AND BOOKEND VORTICES AS WELL AS VERY STRONG OUTFLOW SIGNATURES IN EXCESS OF 50KT IN MANY LOCATIONS. PHOENIX SKY HARBOR REPORTED A PEAK GUST TO 58KT AND LUKE AFB REPORTED A GUST TO 62KT. AFTER THE SQUALL LINE BLEW THROUGH THE PHOENIX AREA IN THE MID AFTERNOON...ADDITIONAL LINES OF SHOWERS AND EMBEDDED THUNDERSTORMS CONTINUED TO REDEVELOP BEHIND THE EXITING FRONTAL BAND...AND MOVE ACROSS SOUTH CENTRAL AZ PRODUCING LOCALLY HEAVY RAINS. NUMEROUS URBAN FLOOD ADVISORIES...FLASH FLOOD AND FLOOD WARNINGS WERE ISSUED FROM THE MID AFTERNOON ON THROUGH THE EVENING HOURS...COVERING MOST OF MARICOPA COUNTY AS WELL AS NORTHWEST PINAL AND SOUTHERN GILA COUNTIES. NO REPORTS OF SERIOUS...LIFE THREATENING FLASH FLOODING WERE REPORTED HOWEVER AND THIS IS PARTIALLY DUE TO THE FACT THAT THE HIGHEST RAIN TOTALS WITH THIS EVENT WERE MOSTLY BELOW 2 INCHES...UNLIKE THE SEPTEMBER 8TH EVENT WHERE MOST OF THE GREATER PHOENIX ARE PICKED UP 3-6 INCHES IN A FEW HOURS.

FORECASTS HAVE BEEN TWEAKED TO COVER CURRENT WEATHER TRENDS AND ARE IN DECENT SHAPE. EXPECT CONTINUED SHOWERS/STORMS EAST OF CENTRAL PHOENIX THROUGH THE EVENING HOURS...THEN A SLOW CLEARING TREND FROM THE WEST FOR THE DURATION OF THE NIGHT. EXPECT DRIER AND MORE SUBSIDENT WESTERLY FLOW ALOFT TO OVERSPREAD THE LOWER DESERTS ON SUNDAY AS THE MAIN UPPER LOW PASSES BY TO OUR NORTH.

.PREVIOUS DISCUSSION...

REST OF TONIGHT...

SATELLITE AND RADAR DATA SHOW A NORTH-SOUTH ORIENTED CORRIDOR OF

September 27, 2014, Exceptional Event, Imperial County PRECIPITATION OVER THE CENTRAL THIRD OF ARIZONA EARLY THIS AFTERNOON. THE CORRIDOR IS ALONG AND EAST OF A COOL FRONT MOVING ACROSS THE STATE. MIXED LAYER CAPE OF 1000+ ALONG WITH DEEP LAYER SHEAR OF 30-40 KTS HAS LEAD TO VERY STRONG STORMS WHICH HAVE MERITED SEVERE THUNDERSTORM WARNINGS FOR HAIL AND WIND. LOW LEVEL SHEAR NOT LOOKING QUITE STRONG ENOUGH OVER OUR AREA TO BE READILY CONDUCIVE TO TORNADO FORMATION THOUGH IT CANT BE RULED OUT. THE STORMS ARE ALSO PRODUCING BRIEF BUT VERY HEAVY RAIN NECESSITATING ADVISORIES. THE CORRIDOR WILL CONTINUE TO MOVE EASTWARD THROUGH THE AFTERNOON WITH MUCH OF THE PHOENIX METRO SEEING A GOOD ROUND OF SHOWERS/THUNDERSTORMS. DYNAMICAL FORCING ASSOCIATED WITH THE UPPER TROUGH CENTERED OVER CALIFORNIA AND NEVADA WILL ALSO AID IN THE LIFT. BEST QG FORCING WILL BE FROM A JET/VORT MAX MOVING THROUGH

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#### SUNDAY...

MOISTURE WILL CONTINUE TO TREND DOWNWARD FROM WEST TO EAST SUNDAY WITH ONLY A LINGERING SLIGHT CHANCE OVER SOUTH-CENTRAL ARIZONA...MAINLY EAST OF METRO PHOENIX. ANTICIPATE SOME ADDITIONAL COOLING MAINLY SOUTH-CENTRAL ARIZONA...BELOW NORMAL.

#### MONDAY THROUGH SATURDAY...

A DRY WEATHER REGIME TAKES HOLD NEXT WEEK AS NORTHWESTERLY FLOW ALOFT TRANSITIONS TO A RIDGE BECOMING CENTERED OVER OUR AREA BY NEXT WEEKEND. IN THE PROCESS...TEMPERATURES SLOWLY CLIMB BACK A BIT ABOVE NORMAL.

## &&

# .AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

FOR THE CENTRAL DESERTS OF ARIZONA...SHOWERS AND EMBEDDED THUNDERSTORMS PERSIST INTO THE EVENING HOURS...BUT THE INTENSITIES ARE MUCH LESS THAN WHAT OCCURRED DURING THE AFTERNOON HOURS. EXPECT A CHANCE FOR SHOWERS OR STORMS THROUGH ABOUT 05Z...WITH MOST CIGS AOA 5K FEET...THEN PERHAPS A SHOWER OR TWO INTO THE EARLY MORNING BEFORE A CLEARING TREND SETS IN. WINDS SHOULD RETURN TO THE SOUTHEAST BY MIDNIGHT OR SO...THEN SWING BACK TO THE WEST BY EARLY AFTERNOON SUNDAY UNDER THE INFLUENCE OF INCREASED SUNSHINE/MIXING.

EXPECT GENLY CLEAR SKIES AT KIPL/KBLH NEXT 24 HOURS...WITH WINDS TO

September 27, 2014, Exceptional Event, Imperial County FAVOR THE WEST AT BOTH SITES. NO AVIATION IMPACTS OVER THE WESTERN DESERTS THRU SUNDAY EVENING.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

&&

.FIRE WEATHER...

MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE

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&&

.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

&&

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...CB
PREVIOUS DISCUSSION...AJ
AVIATION...CB
FIRE WEATHER...MEYERS/MCLANE

September 27, 2014, Exceptional Event, Imperial County

601

WWUS76 KSGX 280356

**NPWSGX** 

URGENT - WEATHER MESSAGE NATIONAL WEATHER SERVICE SAN DIEGO CA 856 PM PDT SAT SEP 27 2014

CAZ056-058-061-062-280500-/O.CAN.KSGX.WI.Y.0047.000000T0000Z-140928T1100Z/ RIVERSIDE COUNTY MOUNTAINS-SAN DIEGO COUNTY MOUNTAINS-COACHELLA VALLEY-SAN DIEGO COUNTY DESERTS-856 PM PDT SAT SEP 27 2014

...WIND ADVISORY IS CANCELLED...

THE NATIONAL WEATHER SERVICE IN SAN DIEGO HAS CANCELLED THE WIND ADVISORY.

GUSTY WESTERLY WINDS WILL CONTINUE THROUGH WIND PRONE AREAS OVERNIGHT...BUT WIDESPREAD ADVISORY STRENGTH WINDS ARE NO LONGER EXPECTED.

\$\$

JAD

# **IOWA STATE UNIVERSITY**

College of Ag

Department of Agronomy

# **Department of Agronomy**

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akrherz@iastate.edu

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Appendix A

067 FXUS66 KSGX 280406 AFDSGX

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE SAN DIEGO CA
906 PM PDT SAT SEP 27 2014

### .SYNOPSIS...

PLEASANT WEATHER WILL PREVAIL ACROSS THE REGION THROUGH MONDAY THANKS TO A LARGE...SLOW-MOVING AREA OF LOW PRESSURE CENTERED OVER NEVADA. ONSHORE FLOW WILL MAINTAIN A DEEP MARINE LAYER WITH AREAS OF LOW CLOUDS EXTENDING TO THE LOWER COASTAL SLOPES OF THE MOUNTAINS AT TIMES. THE LOW WILL EXIT THE REGION MONDAY AFTERNOON...ALLOWING HIGH PRESSURE TO BUILD OVER THE GREAT BASIN. THIS WILL SWING OUR SURFACE FLOW OFFSHORE FOR THE REMAINDER OF THE WEEK...WEAK TO OCCASIONALLY MODERATE OFFSHORE WINDS WILL RESULT IN MUCH WARMER DAYS AND LOWER HUMIDITY INTO NEXT WEEKEND.

#### &&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

IT WAS A MOSTLY SUNNY AND COOL DAY ACROSS SOCAL WITH SEASONAL HIGH TEMPERATURES ALONG THE COAST...BUT INLAND...IT WAS FROM 6 TO 13 DEGREES BELOW AVERAGE. A PLEASANT CHANGE FROM THE PAST COUPLE OF WEEKS. IN ADDITION...OCEAN SURFACE WATER TEMPERATURES ALONG THE CA COAST HAVE SLIPPED A COUPLE OF DEGREES. THIS WILL HELP COOL THE NIGHTS OVER COASTAL AREAS AS WELL. THE 00Z MIRAMAR SOUNDING HAD STRONG WEST WINDS ALOFT AND INDICATED A WEAKLY CAPPED MARINE LAYER ABOUT 2800 FT DEEP. THE SURFACE PRESSURE GRADIENTS WERE TRENDING OFFSHORE...BUT REMAINED WEAKLY ONSHORE TO THE DESERTS AT 8 PM PDT. THESE GRADIENTS WERE BARELY SUFFICIENT TO GUSTS TO ADVISORY STRENGTH IN THE WIND PRONE DESERT PASSES.

EARLIER TODAY WINDS WERE GUSTING 45 TO OVER 50 MPH IN THE WIND PRONE AREAS OF THE DESERTS AND MOUNTAINS. WITH THE PRESSURE GRADIENTS TRENDING OFFSHORE NOW...AND ONLY ISOLATED WIND GUSTS OF 40 MPH OR MORE...THE WIND ADVISORY HAS BEEN CANCELLED. IT WILL STILL BE BREEZY THROUGH THE NIGHT AND ON SUNDAY IN WIND PRONE AREAS OF THE DESERTS AND MOUNTAIN SLOPES...BUT GUSTS SHOULD BE MOSTLY BELOW ADVISORY CRITERIA.

TOMORROW LOOKS SIMILAR TO TODAY. THE DEEP MARINE LAYER AND WEAK CAP SHOULD RESULT IN AREAS OF CUMULUS CLOUDS...MOST PREVALENT ALONG THE FOOTHILLS IN THE INLAND EMPIRE. CLOUDS MAY COALESCE OVERNIGHT WEST OF THE MOUNTAINS...BUT SHOULD BREAK DURING THE MORNING...LEAVING FAIR SKIES. DAYTIME HIGHS WILL CONTINUE TO RUN FROM A FEW DEGREES BELOW AVERAGE ALONG THE COASTAL STRIP...TO 10 TO 15 DEGREES BELOW AVERAGE IN THE MOUNTAINS AND NORTHERN DESERTS.

September 27, 2014, Exceptional Event, Imperial County
A LARGE...CUT-OFF LOW PRESSURE CENTER OVER NEVADA THIS EVENING WILL
MOVE LITTLE THROUGH SUN...THEN BEGIN TO ACCELERATE TO THE NE ON MON.
THERE WILL BE SOME RECOVERY OF HEIGHTS/THICKNESS ACROSS CA THROUGH
MIDWEEK...BUT FLOW WILL REMAIN CYCLONIC ALOFT...AND SURFACE FLOW
ONSHORE. FOR THE LATTER HALF OF THE WEEK A RIDGE OF HIGH PRESSURE
WILL BUILD ALOFT...AND SURFACE HIGH PRESSURE WILL BUILD INTO THE
GREAT BASIN. THIS WILL BRING WARMING AND DRYING...ESPECIALLY WEST OF
THE MOUNTAINS WITH WEAK TO MODERATE OFFSHORE FLOW PREVAILING INTO
NEXT WEEKEND. BY LATE NEXT WEEK...DAYTIME HIGHS ARE ONCE AGAIN
EXPECTED TO BE RUNNING FROM 10-15 DEGREES ABOVE AVERAGE WEST OF THE
MTNS.

&&

#### .FIRE WEATHER...

WESTERLY WINDS OF 15 TO 30 MPH WITH GUSTS OF 35 TO 40 MPH WILL CONTINUE THROUGH LATE TONIGHT BELOW THE WIND PRONE PASSES INTO THE DESERTS. BREEZY CONDITIONS WILL CONTINUE OVER THE RIDGE...ON THE DESERTS SLOPES...AND THROUGH THE PASSES INTO THE DESERTS. THE BREEZY CONDITIONS WILL CONTINUE INTO SUNDAY EVENING...THEN WEAKEN AS HIGH PRESSURE DEVELOPS OVER THE GREAT BASIN. THE BUILDING HIGH PRESSURE WILL SWING OUR WINDS BACK OFFSHORE. THE FLOW WILL INITIALLY BE WEAK...BUT PICK UP STRENGTH DURING THE LATTER HALF OF THE WEEK. THIS WILL BRING MUCH WARMER AND DRYER DAYS BY NEXT WEEKEND. THE COMBINATION OF LOCALLY GUSTY EASTERLY WINDS AND RH IN THE SINGLE DIGITS WILL ELEVATE THE WILDFIRE THREAT.

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## .AVIATION...

280355Z...COASTS/VALLEYS...SCT-BKN025-030 TOPS 035 THROUGH 16Z SUNDAY WITH LOWER VISIBILITY NEAR THE FOOTHILLS WHERE CLOUDS INTERSECT TERRAIN. STRATUS CLEARING BETWEEN 15-17Z.

MOUNTAINS/DESERTS...WESTERLY WINDS 15-25KT WITH GUSTS TO 35 KT ACROSS THE MOUNTAINS...DOWN THE DESERT MOUNTAIN SLOPES AND INTO THE LOWER DESERTS THROUGH SUNDAY AFTERNOON.

&&

# .MARINE...

900 PM...WEST-NORTHWEST WINDS 15-20 KT WITH GUSTS TO 25 KT WILL CONTINUE OVER THE OUTER COASTAL WATERS TONIGHT...DECREASING LATE. STRONGEST WINDS NEAR SAN CLEMENTE ISLAND. A SMALL CRAFT ADVISORY IS IN EFFECT THROUGH 2 AM PDT SUNDAY FOR THE OUTER WATERS.

SUNDAY THROUGH WEDNESDAY...NO HAZARDOUS MARINE WEATHER IS EXPECTED.

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#### .SKYWARN...

SKYWARN ACTIVATION IS NOT REQUESTED. HOWEVER WEATHER SPOTTERS ARE ENCOURAGED TO REPORT SIGNIFICANT WEATHER CONDITIONS.

September 27, 2014, Exceptional Event, Imperial County

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.SGX WATCHES/WARNINGS/ADVISORIES...
CA...NONE

PZ...SMALL CRAFT ADVISORY FOR WINDS UNTIL 2 AM PDT SUNDAY FOR THE WATERS FROM SAN MATEO POINT TO THE MEXICAN BORDER EXTENDING 30 TO 60 NM OUT INCLUDING SAN CLEMENTE ISLAND.

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\$\$

PUBLIC...JAD

AVIATION/MARINE...MOEDE

# IOWA STATE UNIVERSITY

College of Ag
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AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE PHOENIX AZ
330 AM MST SUN SEP 28 2014

#### .SYNOPSIS...

ISOLATED SHOWERS AND THUNDERSTORMS WILL CONTINUE ACROSS PORTIONS OF SOUTH CENTRAL ARIZONA THIS MORNING...MAINLY FROM PHOENIX EASTWARD. OTHERWISE A MUCH DRIER AND MORE STABLE AIRMASS WILL FOLLOW THIS AFTERNOON. BELOW NORMAL TEMPERATURES ARE FORECAST TODAY. DRY WESTERLY FLOW ALOFT WILL MOVE BACK INTO THE REGION THIS WEEK... PRODUCING MOSTLY CLEAR SKIES...WITH AFTERNOON TEMPERATURES RISING A FEW DEGREES EACH DAY.

&&

#### .DISCUSSION...

TODAY AND TONIGHT...

THE LAST OF A SECONDARY SHORTWAVE WAS MOVING THROUGH CENTRAL AZ THIS MORNING RESULTING IN ISOLATED SHOWERS AND THUNDERSTORMS ACROSS THE GREATER PHOENIX AREA...AND IN SOUTHERN GILA COUNTY. AT 3 AM A SPOTTER IN CAVE CREEK REPORTED BRIEF HEAVY RAIN AND PEA SIZED HAIL. A REFLECTION OF THIS DISTURBANCE WAS BEST SEEN AT 500 MB...WHICH WILL MOVE QUICKLY OUT OF THE AREA LATER THIS MORNING. THEREFORE ISOLATED SHOWERS AND THUNDERSTORMS WILL CONTINUE ACROSS THE GREATER PHOENIX AREA THIS MORNING.

OTHERWISE...A DRIER AND MORE STABLE AIRMASS WILL FOLLOW LATER IN THE DAY. WARMER TEMPERATURES ALOFT SPREADING IN FROM THE WEST THIS AFTERNOON SHOULD CAP ANY FURTHER CONVECTIVE DEVELOPMENTS LATER IN THE DAY...AND TONIGHT.

MONDAY THROUGH SATURDAY...

DRY STABLE WEATHER WITH MOSTLY CLEAR SKIES ARE FORECAST THIS PERIOD. AFTERNOON TEMPERATURES WILL SLOWLY WARM EACH DAY...RISING ABOVE NORMAL THE LATER HALF OF THE WEEK.

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.AVIATION...

SOUTH-CENTRAL ARIZONA INCLUDING KPHX...KIWA...AND KSDL...AND SOUTHWEST ARIZONA AND SOUTHEAST CALIFORNIA INCLUDING KIPL AND KBLH...

FOR THE CENTRAL DESERTS OF ARIZONA...SHOWERS AND EMBEDDED THUNDERSTORMS PERSIST INTO THE EVENING HOURS...BUT THE INTENSITIES ARE MUCH LESS THAN WHAT OCCURRED DURING THE AFTERNOON HOURS. EXPECT A CHANCE FOR SHOWERS OR STORMS THROUGH ABOUT 05Z...WITH MOST CIGS AOA 5K FEET...THEN PERHAPS A SHOWER OR TWO INTO THE EARLY MORNING BEFORE A CLEARING TREND SETS IN. WINDS SHOULD RETURN TO THE

September 27, 2014, Exceptional Event, Imperial County SOUTHEAST BY MIDNIGHT OR SO...THEN SWING BACK TO THE WEST BY EARLY AFTERNOON SUNDAY UNDER THE INFLUENCE OF INCREASED SUNSHINE/MIXING.

EXPECT GENLY CLEAR SKIES AT KIPL/KBLH NEXT 24 HOURS...WITH WINDS TO FAVOR THE WEST AT BOTH SITES. NO AVIATION IMPACTS OVER THE WESTERN DESERTS THRU SUNDAY EVENING.

AVIATION DISCUSSION NOT UPDATED FOR AMENDED TAFS.

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.FIRE WEATHER...
MONDAY THROUGH FRIDAY...

DRIER AIR WILL BEGIN MOVING INTO THE AREA ON MONDAY...WITH LITTLE TO NO CHANCE OF CONVECTION THE REMAINING PORTION OF THE FORECAST PERIOD. MINIMUM HUMIDITY LEVELS WILL TREND DOWN TO AROUND 15 PERCENT BY THURSDAY. IN ADDITION TO THE DRIER AIR...COOLER TEMPERATURES ARE EXPECTED THE ENTIRE PERIOD. SOME GUSTY WEST TO SOUTHWEST WINDS ARE POSSIBLE ALONG AND BEHIND THE TROUGH EARLY SUNDAY...ALTHOUGH WIND SPEEDS WILL BE GENERALLY LIGHT AND FOLLOW TYPICAL DIURNAL PATTERNS MONDAY THROUGH THURSDAY.

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.PSR WATCHES/WARNINGS/ADVISORIES...

AZ...NONE.

CA...NONE.

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VISIT US ON FACEBOOK...TWITTER...AND AT WEATHER.GOV/PHOENIX

DISCUSSION...VASQUEZ
AVIATION...CB
FIRE WEATHER...MEYERS/MCLANE